RADWAG®

accessories

Manufacturer of Electronic Weighing Instruments

www.radwagusa.com

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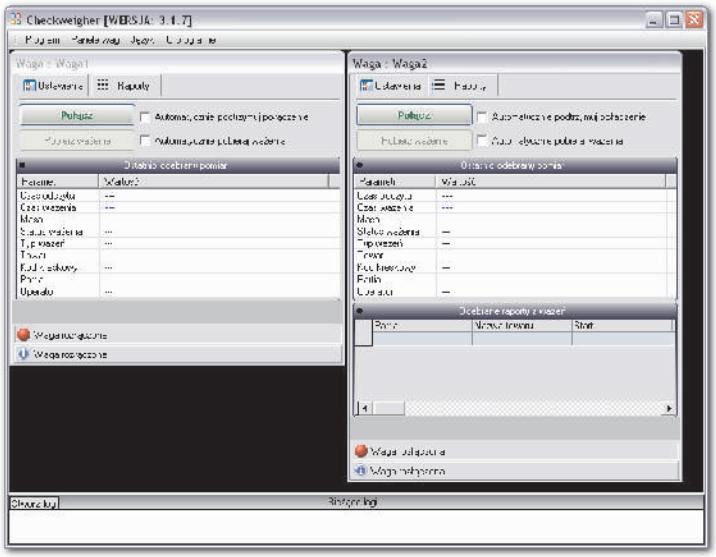
CHECKWEIGHER SWD computer software

Product description:

The program is intended to collect both partial weighing procedures and packed product control complete reports from Radwag checkweighers.

The application can serve many balances at the same time, enabling automatic segregating and saving loaded weighing procedures in separate databases. It also enables reports generating and exporting data to text format.



Designed for scales:

- dynamic/control, based on TMC head

Functions:

- servicing many balances at the same time
- program operating in automatic or manual mode, measurements collecting from balance heads and sending them to local databases
- collected measurements segregating inside database (MS Access), giving consideration to time and measurement category
- measurements (databases) exporting to CSV text format, with semicolon as records separator
- communication servicing through port RS-232 and Ethernet (TCP)

Computer requirements:

- processor 1,2 GHz
- free 500 MB on hard drive
- RAM 256 MB (reccommended 512 MB)
- operation system Windows 2000/XP

Language versions: Polish, English, Russian.

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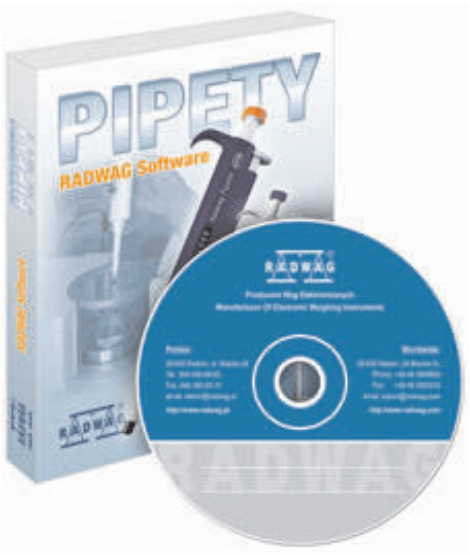
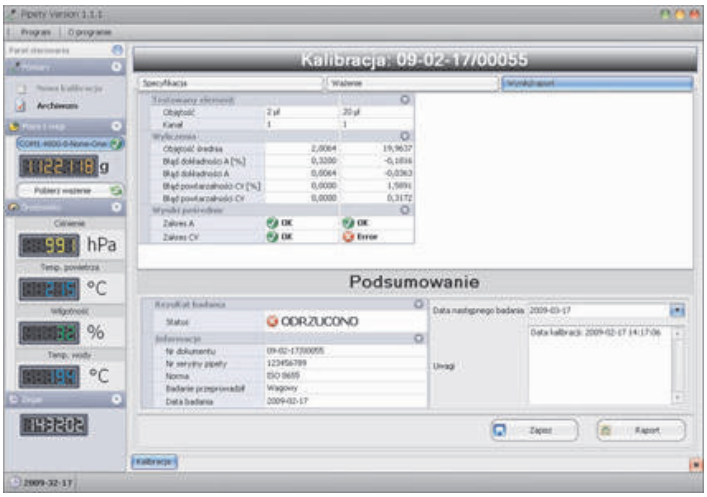
Pipettes computer software



Product description:

Computer Software PIPETY is designed for the determination of volume measurement errors of pipettes (batchers) in accordance with the standard ISO 8655.



Designed for scales:

- XA/X, XA/Y, MYA/P

Functions:

- calculating results on the basis of:
  - average volume of a pipette (channel)
  - systematic error es (accuracy error A)
  - random error CV (repeatability error)
- calibration of constant volume pipettes (single channel) and variable volume pipettes (1, 8, 12 channel)
- automatic measuring procedures depending on the type of tested pipette
- information on pipettes are stored in the data base (option of defining your own models)
- storing calibration results in MS Access data bases
- back-up of databases, including calibration results
- print-outs of pipette calibration protocols
- exporting test reports to PDF, MS Word, Excel and other
- planning dates of subsequent calibrations
- filtering planned pipette calibration: current week or month
- cooperation with a balance connected through RS 232 port:
  - all RADWAG models – based on non-coded communication frame
  - possibility to connect balances of different manufacturers
- option of manual input of weighing values

Computer requirements:

- processor INTEL or AMD min 2000 MHz
- min 500 MB RAM
- SVGA video card
- 50 GB HDD storage space
- Windows XP/2000/Vista or a newer operating system
- Microsoft R .NET Framework 2.0

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E2R EVIDENCE computer software

Product description:

Recording of measurements performed on Radwag weighing terminals, joined in a web and saved in computer database. The system is based on database MS SQL 2000 or MS SQL 2005.

The program is addressed to receivers of various industry branches: meat, fish food, sugar, chemical and metallurgy among others.

The program is especially used at places, where products are weighed, that are not directly connected one to another by common data and they are not a part of a weighing process which has its defined beginning and ending, e.g. transaction or production order.

Designed for scales:

- TMC, WPW, equipped with PUE 5 and PUE 7

Functions:

- Possibility to add, delete and edit following card files of: products, operators, contractors, stores, tares (packages)
- Monitoring from the level of computer of weighing procedures performed on weighing terminals
- Simplified Reporting Module enabling report generating according to chosen filters: product's code or name, operator's code or name, contractor's code or name, date of weighing, lot number, balance number
- Possibility to sum up filtered data in form of: total of performed weighing procedures, number of carried out measurements, performed measurements' average, minimal weighed mass, maximal weighed mass
- Possibility to service large amount of data in real time
- Possibility to monitor production process from many places of the firm house via balances connected in net
- Defining access levels for individual users
- Possibility to extend program functionality with additional modules: E2R Transactions, E2R Formulations, E2R Weighing procedures, E2R Reports

Computer requirements:

- processor 1,2 GHz
- free 500 MB on hard drive
- RAM 256 MB (reccommended 512 MB)
- operation system Windows 2000/XP

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E2R RECIPES computer software

Product description:

Chosen formulation's components weighing according to production order, formulations' defining with possibility to declare certain component's tolerance range. The system is based on database MS SQL 2000 or MS SQL 2005.

The program is addressed to receivers of various industry branches, like:
-building,
-food,
-sugar,
-chemical,
-metallurgical.

Designed for scales:

- TMC, equipped with PUE 5 and PUE 7

Functions:

- Possibility to add, delete and edit following card files of: products, stores, operators, tares, contractors, formulations
- Monitoring of weighing procedures performed on weighing terminals containing simplified Reporting Module. Possibility of report generating according to: product's code or name, operator's code or name, formulation's code or name, order's code or name, date of weighing, lot number, balance number
- Possibility to sum up filtered data in form of: total of weighed component masses, number of certain component measurements, weighed component measurements' average, minimal mass of weighed component, maximal mass of weighed component
- Possibility to define weighed amounts for individual components of a formulation
- Possibility to fix weighed component's tolerance
- Formulation's weighing up to defined mass
- Store management service
- Cooperating with Data Synchronization Module
- Production orders service
- Defining access levels for individual users
- Possibility to extend program functionality with additional module: E2R Reports

Computer requirements:

- processor 1,2 GHz
- free 500 MB on hard drive
- RAM 256 MB (reccommended 512 MB)
- operation system Windows 2000/XP

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E2R TRANSACTIONS computer software

Product description:

The module enables recording of measurements performed on weighing terminals joined in net. The measurements can be imported or exported to external accountancy or production managing programs. The system is based on database MS SQL 2000 or MS SQL 2005.

The program is addressed to receivers of various industry branches: meat, fish food, sugar, chemical and metallurgy among others.

The program is intended for companies, where weighing process is based on transactions or production orders, where it is necessary to monitor product flow, double-sided data exchange with accountancy programs, production settlement.

Designed for scales:

- TMC, WPW, equipped with PUE 5 and PUE 7

Functions:

- Possibility to add, delete and edit following card files of: products, operators, contractors, stores, tares (packages)
- Monitoring from the level of computer of weighing procedures performed on weighing terminals
- Simplified Reporting Module enabling report generating according to chosen filters: product's code or name, operator's code or name, contractor's code or name, order's code or name, transaction's code or name, date of weighing, lot number, balance number
- Possibility to sum up filtered data in form of: total of performed weighing procedures, number of carried out measurements, performed measurements' average, minimal weighed mass, maximal weighed mass
- Possibility to service large amount of data in real time
- Servicing of selling, buying, inter-store shift transaction
- Production orders servicing
- Store management servicing
- Cooperation with Data Synchronization Module
- Possibility to monitor production process from many places of the firm house via balances connected in net
- Defining access levels for individual users
- Possibility to extend program functionality with additional modules: E2R Weighing procedures, E2R Reports

Computer requirements:

- processor 1,2 GHz
- free 500 MB on hard drive
- RAM 256 MB (reccommended 512 MB)
- operation system Windows 2000/XP

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E2R WEIGHTINGS computer software

Product description:

Recording of measurements performed on weighing terminals assigned for "+/" quick control, which helps limiting operator's role to minimum. The system is based on database MS SQL 2000 or MS SQL 2005.

The program is addressed to receivers of various industry branches, e.g.:
-fish,
-food,
-sugar,
-chemical.

Designed for scales:

- WPW, equipped with PUE 7

Functions:

- Possibility to add, delete and edit following card files of: products, operators, stores
- Monitoring of weighing procedures and performed production orders from optional point of the factory web, taking into consideration weighing procedures of individual operating standing
- Possibility to sum up performed production orders with single standing division, in form of: total of performed weighing procedures, number of performed measurements, average of performed measurements, minimal weighed mass, maximal weighed mass
- Monitoring of performed production orders from the level of the application by use of simplified Reporting Module
- „+/-" quick control balances servicing
- Cooperation with Data Synchronization Module
- Production orders servicing
- Store management servicing
- Individual users access levels defining
- Possibility to extend program functionality by E2R Reports additional module

Computer requirements:

- processor 1,2 GHz
- free 500 MB on hard drive
- RAM 256 MB (reccommended 512 MB)
- operation system Windows 2000/XP

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E2R REPORTS computer software

Product description:

Large extend of generating reports and statistics of weighing procedures saved in program E2R System database. The system is based on MS SQL 2000 or MS SQL 2005 database.

Designed for scales:

- E2R Evidence, E2R Transactions, E2R Formulations, E2R Weighing procedures

Functions:

- Possibility to create following reports:
  Lot report, worker's working time report, worker's work performance report, production order report, production line report
- Possibility to create special reports fulfilling customer's wish, according to individual calculation
- Possibility to use E2R Reports module in following applications:
  E2R File, E2R Transactions, E2R Formulation, E2R Weighing procedures

Computer requirements:

- processor 1,2 GHz
- free 500 MB on hard drive
- RAM 256 MB (reccommended 512 MB)
- operation system Windows 2000/XP

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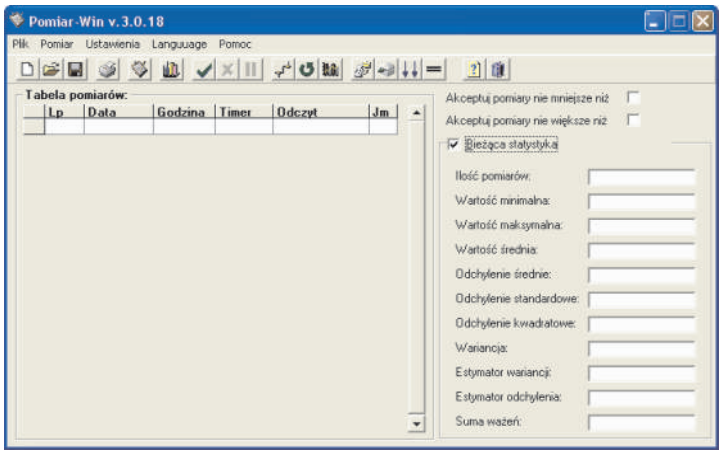
PW-WIN 2004 computer software

Product description:

PW-WIN software is designed for collecting measurement data from RADWAG weighing instruments and its statistics process.



Designed for scales:

- with standard communication frame

Functions:

- readout from instrument, record from measurements and saving data to a file
- possibility of manual and automatic registration of measurements
- registration and storing of measurement data in a form of file
- visualization of measurements data in a form of graph
- static processing of measurement data
- possibility of creating data from chosen measuring session
- printout of measuring data, graphs and statistics
- mainlyt used in laboratories

Computer requirements:

- processor 1,2 GHz
- free 500 MB on hard drive
- RAM 256 MB (reccommended 512 MB)
- operation system Windows 2000/XP

Language versions: Polish, German, English, French.

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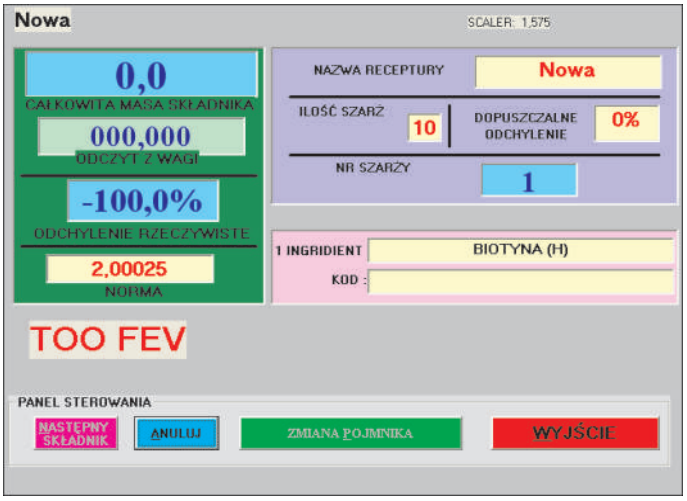
REC-FS 2000 computer software

Product description:

The software is designed for creating recipes for measured mixtures with possibility of declaring the tolerance field for particular ingredient and measuring each ingredient in the receipt.



Designed for scales:

- with standard communication frame

Functions:

- base for recipes and materials in the software
- performing the weighing of recipes
- creating reports from performed measurements
- measuring a recipe for particular ingredient
- measuring a recipe to determined mass
- reporting of an indication of material consumption

Computer requirements:

- processor 1,2 GHz
- free 500 MB on hard drive
- RAM 256 MB (reccommended 512 MB)
- operation system Windows 2000/XP

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REC-NET 2005 computer software

Product description:

The software allows for performing measurements the ingredients of a particular recipe and creation of recipes from measured ingredients. Additionally, it is possible to declare the tolerance field for chosen ingredient.

Designed for scales:

- interactive terminals: TMC, HX

Functions:

- data base of recipes, orders, materials and operators in the computer with the software
- adding, deleting and edit mode of recipes
- possibility of defining the side of measured masses for each ingredient of the recipe
- possibility of setting tolerance for measured ingredient
- performance of measuring recipes
- creation of reports from performed measurements
- measuring a recipe for defined material
- measuring a recipe for defined mass
- weighing instrument connected to computer in on-line

Computer requirements:

- processor 1,2 GHz
- free 500 MB on hard drive
- RAM 256 MB (reccommended 512 MB)
- operation system Windows 2000/XP

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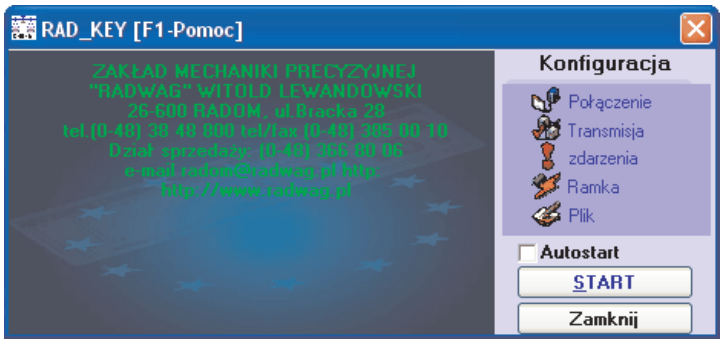
RAD-KEY 2000 computer software

Product description:

A software for communication between a computer in PC class and standard Radwag weighing instruments. Main subject of the software is collecting the information on mass indicated by an instrument. The communication with the computer is realized through RS 232 interface.



Designed for scales:

- with standard communication frame

Functions:

- collecting data from measurements and saving them into a file
- different ways of initializing the process of collecting data from an instrument to a computer (by a button in an instrument or computer keyboard)
- reading of transmission bits by RS 232 interface into a computer and placing the bits in place of cursor in the computer.

Computer requirements:

- processor 1,2 GHz
- free 500 MB on hard drive
- RAM 256 MB (reccommended 512 MB)
- operation system Windows 2000/XP

Language versions: Polish, Czech, German, English, French.

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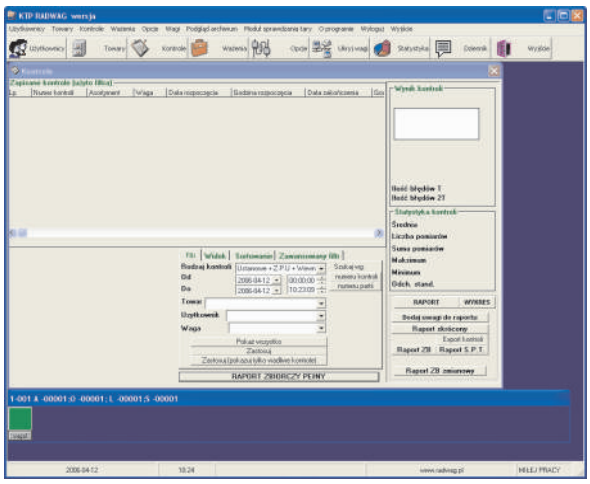
KTP-NET 2003 computer software

Product description:

Software KTP-NET/N/2003 or KTP-NET/S/2003 is designed for collection of measurements from RADWAG weighing instruments connection in net. The net can be composed from one or a few kinds of weighing instruments. The start of operation can be done from level of scale of from the computer software, and finished automatically after checking of proper quantity of packages.

Basing on the collected data, it is possible to perform the evaluation of the manufactured packaged goods for compatibility with:

- internal quality management system of the factory
- regulation of the Notice of Manager of Main Measuring Office



Designed for scales:

- WPX
- WTX
- Interactive terminals: TMC, HX

Functions:

- software allows for performance of two kids ofcontrol:
  - according to regulation "On packaged Goods"
  - internal, i.e. modified for:
    - size of batch
    - control time
    - minus value of T error

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Functions:

- -plus vlue of T error
- -factor for calculation of acceptable average value
- -means of finishing control, if:
  - *ruqired quantity is reached
  - *required time of control is reached
  - *required time of control or required quantity of batch is reached
  - *required time of control and required quantity of batc is reached
- •possibility of starting the control in three different ways:
  - ◦control begun by the operator of the weighing instrument, by sending the information on start of control to computer software
  - ◦control is begun by the operator from computer software level, by indication of weighing instrument number on which the control will run
  - ◦control takes place from the data base of the software by random choice of weighing for detailed good.
- •automation of control process
- •control of opereator's errors
- •possibility of operation of dual-platform weighing instruments with TMC terminal
- •automatic printout of report after finishing control
- •defining the access levels to software functions
- •printout of reports from control
- •printout of statistics
- •view of reports and statistics from any place in company net
- •possibility of running control according to one of chosen algorithms:
  - ◦control with average tare
  - ◦control with changeable tare
  - ◦full empty destructive control
  - ◦full empty non-destructive control
  - ◦empty full destructive control
  - ◦full empty non-destructive control
- •control of packaging mass - tare

Computer requirements:

- •processor 1,2 GHz
- •free 500 MB on hard drive
- •RAM 256 MB (reccommended 512 MB)
- •operation system Windows 2000/XP

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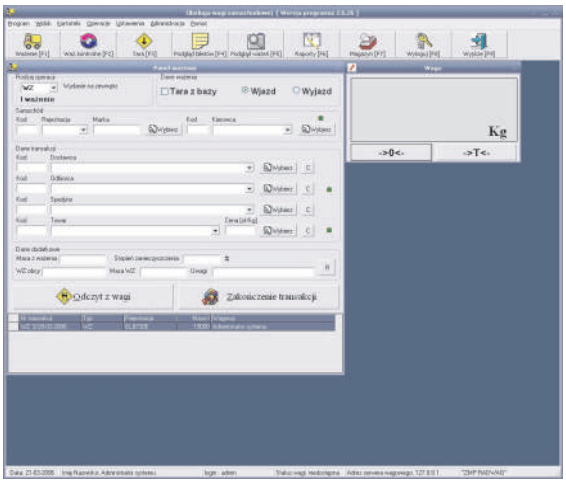
OWS 2005 computer software

Product description:

This software cooperates with weighbridges manufactured by 'RADWAG'. It is a part of weighing system, which is a supplement of our weighbridges, due to which the whole process of weighing vehicles is easier and takes much shorter time.



Designed for scales:

- terminal TMC

Functions:

- readout of data from scale and registration of results in the software
- registration of measurement data in a form of a file
- running random quantity of measurements
- printing the weighing tickets
- generation of reports from measurements
- data base of drivers, operators, materials and contractors
- registration of control measurements
- possibility of cooperation with barriers system and lights system
- possibility of cooperation with camera system for recording the situation on the scale
- cooperation with system controlling the wastes

Computer requirements:

- processor 1,2 GHz
- free 500 MB on hard drive
- RAM 256 MB (reccommended 512 MB)
- operation system Windows 2000/XP

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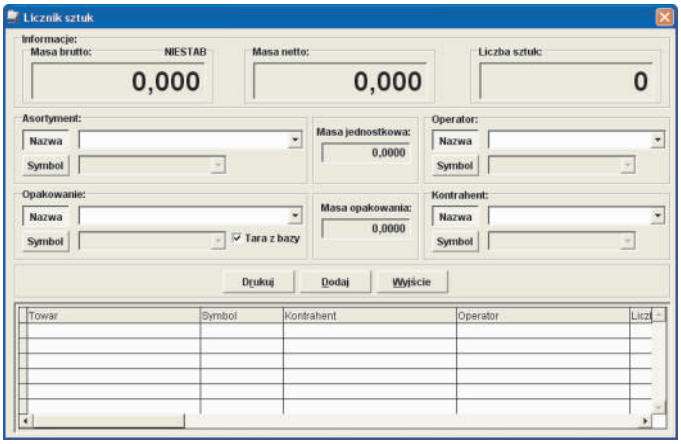
LS-FS 2000 computer software

Product description:

Software is used to view the quantity of pieces of measured assortment in real time.



Designed for scales:

- WPT
- with standard communication frame (e.g.: + 1.350 g)

Functions:

- counting pieces for a chosen material
- pinting the results of measurements
- data base of: materials, packages, operators and contractors
- possibility of choosing a label for measured assortment

Computer requirements:

- processor 1,2 GHz
- free 500 MB on hard drive
- RAM 256 MB (reccommended 512 MB)
- operation system Windows 2000/XP

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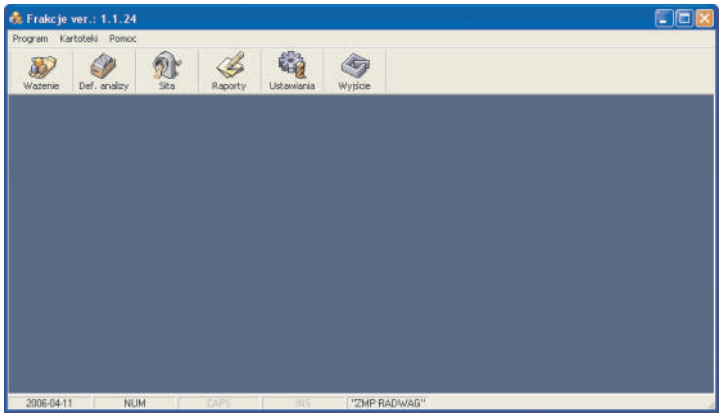
AF 2005 computer software

Product description:

The software determines the percent of content of determined fractions (e.g. dimension of grains) in a sample.



Designed for scales:

- terminal TMC

Functions:

- defining the fractions
- data base on users and sieves
- definitions of analyses
- weighing of each fraction
- percent analysis of content of each fraction
- generating reports from measurements and from their analysis
- readout of measurements and their record
- record of measurement data in a form of a file from balance of measurements
- registration of control of measurements

Computer requirements:

- processor 1,2 GHz
- free 500 MB on hard drive
- RAM 256 MB (reccommended 512 MB)
- operation system Windows 2000/XP

* NOTE! RADWAG does not sell software "in box". Boxes presented on our Web-site are of virtual characteristic only, and they are not accessible with purchased software. The customer receives purchased software on a CD in special protective cover and the user manual as a brochure.

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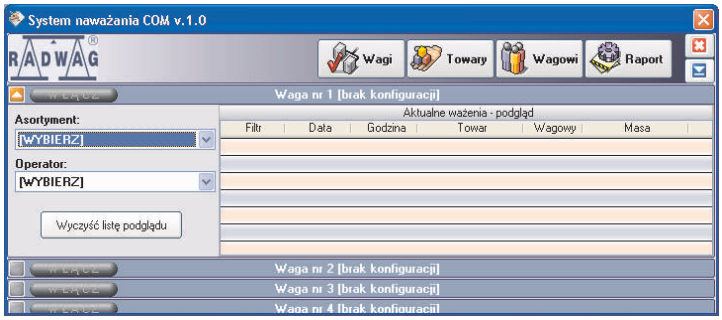
SNC 2005 computer software

Product description:

COM software is designed for collecting of weighings from RADWAG weighing instruments. It enables generating reports with extended filtering mechanism and weighings placed in computer data base.



Designed for scales:

- with standard communication frame

Functions:

- operating up to 4 scales with 5 -button indicator, plugged in to local RS-232 computer ports
- collecting weighings from individual scales using Print button on indicator
- for each weight measurement assigning goods name and weigh operator
- for each good possibility of assigning mass threshold: lower and upper
- real time weighing results displayed individual for each scale
- generating reports for individual scales with possibility of filtering, printing, exporting and deleting filtered weighings

Computer requirements:

- processor 1,2 GHz
- free 500 MB on hard drive
- RAM 256 MB (reccommended 512 MB)
- operation system Windows 2000/XP

* NOTE! RADWAG does not sell software "in box". Boxes presented on our Web-site are of virtual characteristic only, and they are not accessible with purchased software. The customer receives purchased software on a CD in special protective cover and the user manual as a brochure.

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PRINTERS "KAFKA"

Printer "Kafka" enables two-way thermal printing by mobile head. The design of the mark: matrix 8 × 8 points. Print Speed: 0.75 line / sec.

Depending on the version, Kafka can be equipped with real time clock, statistic functions or internal battery (outdoor operation).

Specification:

	KAFKA 1/RG base functions, (main current supply)	KAFKA 1/Z/RG clock of real time, (main current supply)	KAFKA 1/RG Portable base functions, (battery power and main current supply)	KAFKA 1/Z/RG Portable clock of real time, (battery power and main current supply)	KAFKA SQS date, time and statistic functions, (main current supply)
Print	Dual direction thermal print with moveable 8-point head, character constructio: 8 x 8 point matrix, print speed: 0,75 line/s, quantity of signs a line: 40, 80				
Set of characters	One from below mentioned: IBM set 2, Mazovia, DHN, Latin-2 PC, Cyrylics, Latin-2 ISO				
Thermal paper	Roll: width 112 mm, max diameter 42 mm, paper length 20 m, marking: TF 50KS-E2C				
Power supply	8,5V - 14V DC or 7V - 10V AC 50Hz, power consumption: 3W - 15W (max.), Power connection: type Jack 2.1, external power adapter: 220V / 9V AC 1,5A 50 Hz or battery (portable version)				
Interface	One from below mentioned: RS232C, RS242 (TTL), RS422A (RS485), power loop 20mA (CL), interface connection: 5 pin type DIN				
Transmission parameters	Speed of transmission: 1200, 2400, 4800, 9600 bod (other for secial order.), transmission protocol: machine with DTR, Data format: 8 or 7 bytes, with or without parity control, parity: even or odd				
Durability	MTBF: 5000 hours, MCBF: 500 000 lines				
Working conditions	Working temperature: 5°C to 35°C, relative humidity: 10% - 80% (no condensation)				
Masses nad dimensions	165 x 140 x 50 mm, 0,45 kg (without paper roll)				
Printer marking with set of characters	KAFKA IBM set 2, KAFKA 1 WIN 1250, KAFKA 2 DHN, KAFKA 3 Latin - 2 PC, KAFKA 4 Cyrylica, KAFKA 5 Latin - 2 ISO				
Components	printer, external power adapter, interface plug or cable (according to order), roll of thermal paper, user manual, warranty and external power adapter (portable version)				

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PRINTERS "EPSON"

Specification:

	TM-U220A with paper roll reeler and paper cutter	TM-U220B with paper cutter	TM-U220D basic version
Means of print	9-needle		
Fonts	7 × 9 / 9 × 9 points		
Quantity of characters in one line	paper 76,0 mm: 42/40/35/33 cpl 69,5 mm: 40/36/32/30 cpl 57,5 mm: 33/30/27/25 cpl		
Character dimensions (mm)	1,2 / 1,6 / 1,7 / 1,9 / 2,0(width) x 3,1(height)		
Quantity of charatcters per inch	17,8 / 16 / 14,5 / 13,3		
Interfaces	RS-232 or parallel or USB or Ethernet drive for casette drawers, power adapter connection		
Input buffer	1 kB or 40 bytes		
Mamory for logo	128 kB		
User defined memory	8 kB		
Print speed	6 lines / second (30 characters / line)		
Paper width	76,0 mm +/- 0.5 69,5 mm +/- 0.5 57,5 mm +/- 0.5		
Paper roll diameter	maximally 83 mm		
Colouring tape	ERC-38 purple, black or red-black		
Paper cuttet	Cutter type "full cut" or "one-point-left cut" built in models type A and B		
Power consumption	Stand-by: 2,2 W while printing: 31 W		
Power adapter	included (compatible with PS-180)		
Casette drawers	drive for two casette drawers		
Durability	MTBF: 180 000 hours MCBF: 18 million lines cutter: 800 000 cuts		
Dimensions	160 x 286 x 158 mm	160 × 248 × 139 mm	160 x 248 x 139 mm
Weight	2,7 kg	2,5 kg	2,3 kg
Colours	white: EPSON cool white or dark grey: EPSON dark grey		
Standard functions	paper reeler (type A) paper cutter (type A and B) easy paper exchange type "Drop-in" built in fuction Auto Status Back paper end sensor, paper end sensor, power adapter		
Options	wall hanger (for type B) customer display DM-D (connected through interface UB-S09)		
Standard EMI	sign CE, EN55022 class B, EN55024		
Safety standards	EN60950		

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PRINTERS "CITIZEN"

Specification:

	CLP 521	CLP 621	CLP 631	CL-S700
Print	thermal	thermal, thermo-transfer	thermal, thermo-transfer	thermal, thermo-transfer
Head	200 dpi	200 dpi	300dpi	200dpi
Print speed	100 mm / sec	100 mm / sec	175mm/sec	250mm/sek
Maximal print width	104 mm	104 mm	104 mm	104 mm
Mximal print length	812 mm	812 mm	812 mm	406 mm
Minimal print length	12,7 mm	12,7 mm	12,7	12,7
Label width	19 - 118 mm	19 - 118 mm	12,5 - 118 mm	25,4-118 mm
Material thickness	0,0635 ÷ 0,254 mm	0,0635 ÷ 0,254 mm	0,0635 ÷ 0,254 mm	0,0635 ÷ 0,254 mm
Material kind	labels, cartoons, continuous media, folder	labels, cartoons, continuous media, folder	labels, cartoons, continuous media, folder	labels, cartoons, continuous media, folder
Material recognition	overexposure optical sensor and light reflection from material	overexposure optical sensor and light reflection from material	overexposure optical sensor and light reflection from material, optional moveable optical sensor	overexposure optical sensor and light reflection from material, optional moveable optical sensor
Fonts	8 vector fonts, 1 half-tome screen	8 vector fonts, 1 half-tome screen	1 vector, 8 half-tome screen, True Type sensors in standard	1 vector, 8 half-tome screen, True Type sensors in standard
Bar codes	All standard types including: EAN-8, EAN-13, UPC-A, UPC-E, UCC/EAN 128, 3 with 9, 2 with 5, code 93, 128, Coderbar, Telepen, Zip and dual dimensions: PDF-417,UPS Maxicode, Posnet			
Communication interface	-	-	Parallel (Centronics) series RS232C	Parallel (Centronics) series RS232C, USB 1.1
Control panel	-	-	4 buttons, 4 diodes LED	3 buttons, 2 diodes LED, display LCD
Input buffer	-	-	-	12 kB
Memory	-	-	8 MB	16 MB
Memory extension	-	-	Flash 2 MB memory cards	Flash 4 MB memory cards
MTBF (average operation time between defects)	-	-	-	printer 1000 km, printing head 30 km
Dimensions (w × h × l)	-	-	224 × 288 × 270 mm	255 × 480 × 253 mm
Mass	-	-	4,5 kg	13,5 kg
Options	-	-	Paper cutter, divider, Ethernet, WLAN	Paper cutter, divider, Flash memory card, network input, real time clock

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TABLE FOR SCALE

Table for scale is offered in three dimensions, specially adjusted for Radwag weighing instruments:

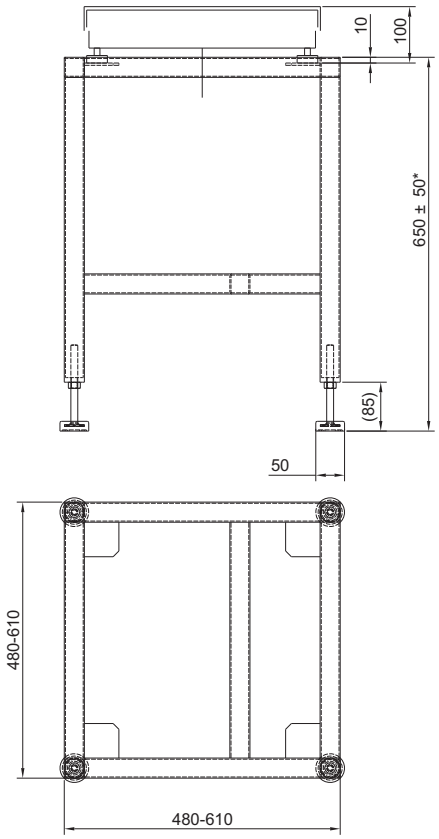
1) standard spacing between the feet 370×370mm, table top dimensions 410×410mm and feet with diameter 36mm

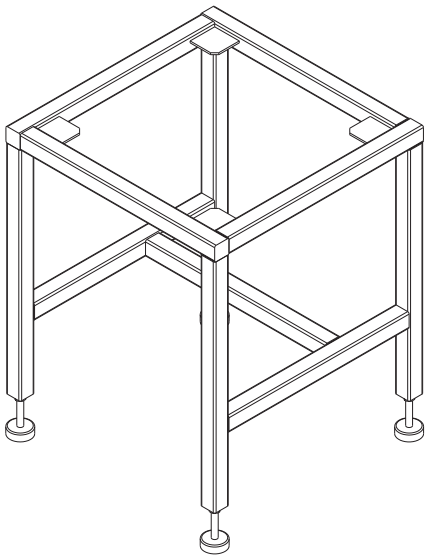
2) standard spacing between the feet 400×400mm table top dimensions 500x500mm and feet with diameter 36mm

3) standard spacing between the feet 500×500mm table top dimensions 600×600mm and feet with diameter 36mm

Basic features :
Possibility of adjusting height of the table in range +/- 50mm
By proper screwing of the table feet.

Specification:
Manufactured in stainless steel technology
Height : 650 +/-50mm





*-adjustable table height
by screwing feet

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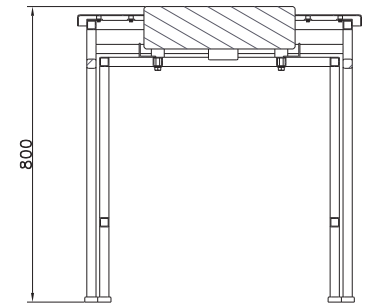
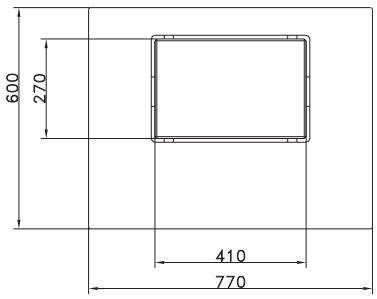
ANTIVIBRATION TABLE

Anti vibration table can be used with as a base for analytical, laboratory or control balance. It has been designed for assurance of stable operation conditions while performing very accurate measurements.

The table is equipped with its own base and is furnished with MDF painted table top, with a hole for marble board which is the stabilization part of the table. The construction of the table is made of mild steel profiles and feet with thread for adjusting height. The marble board is positioned on an independent base (for improvement of stable operation of the weighing instrument). Parts of the table are also offered in stainless steel and acid-proof construction, and the dimensions of the table can be separately adjusted to the customer's requirements.

wersja SAP/N





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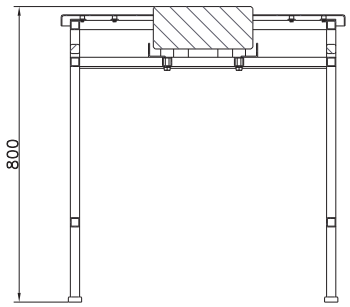

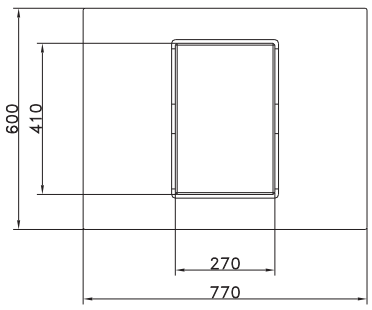

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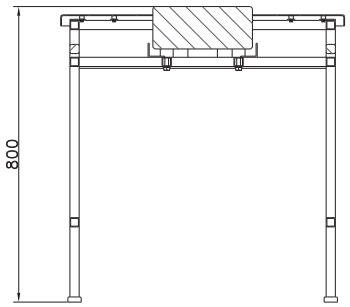

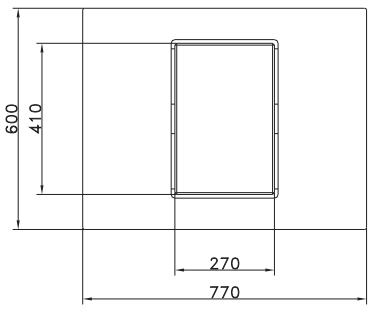

Specification:

Marble concrete board:	Length	410 mm	Table:	Length	770 mm
	Width	270 mm		Width	600 mm
	Height	115 mm		Height	800 mm
	Mass	29 kg		Mass	25 kg

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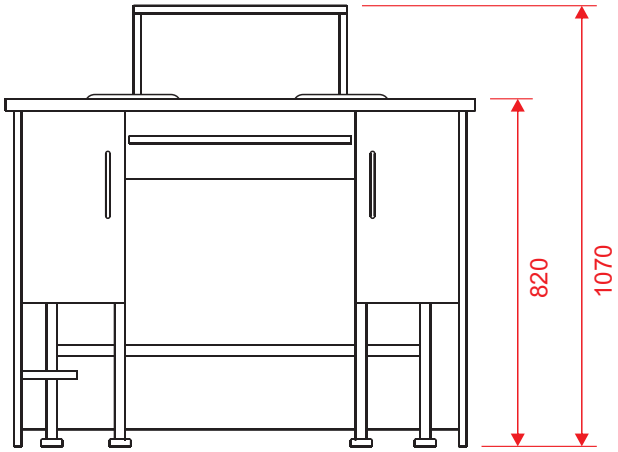
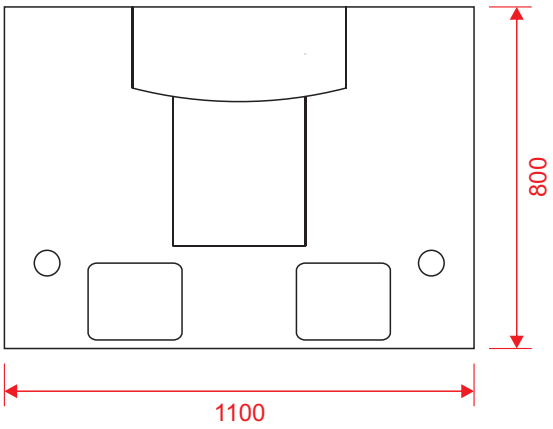
PROFESSIONAL WEIGHING TABLE

Professional Weighing Table is intended for the use with microbalances and analytical balances. It is incorporates an independent anti-vibration table with a stone table top. This solution eliminates possible vibrations and significantly shortens balance stabilization time.

Two lockable cabinets and pull-out keyboard tray facilitate installing PC computer with a keyboard, mouse, and UPS power supply. The raised monitor platform at the rear part of the table is designed for the installation of LCD monitor . The table features high functionality and ergonomics.

Unit contents
- weighing table
- anti-vibration table





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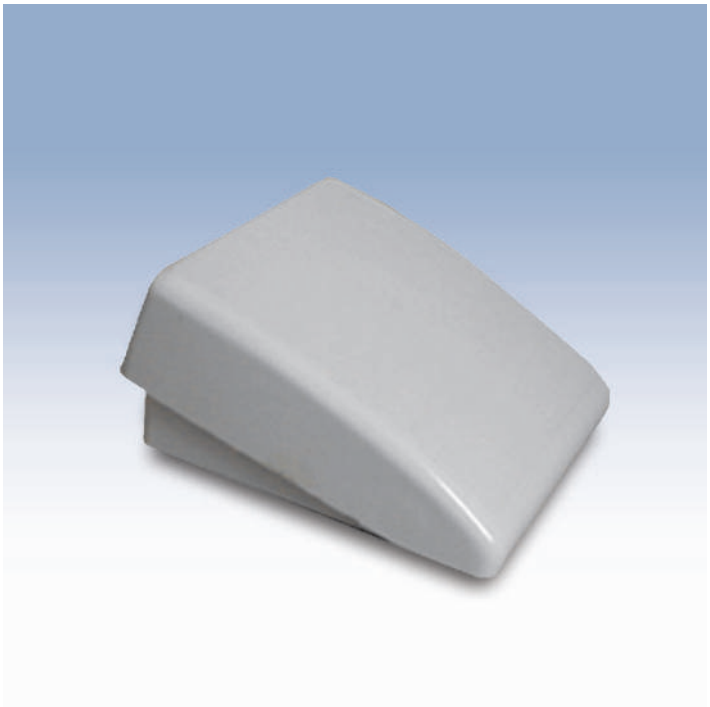
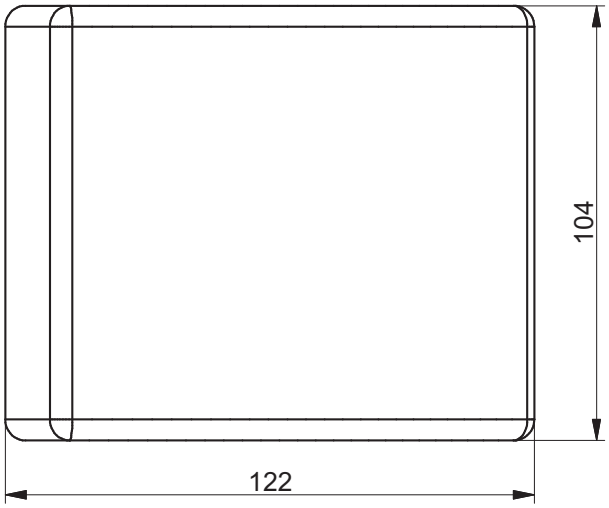
FOOT PRINT AND TARE BUTTONS

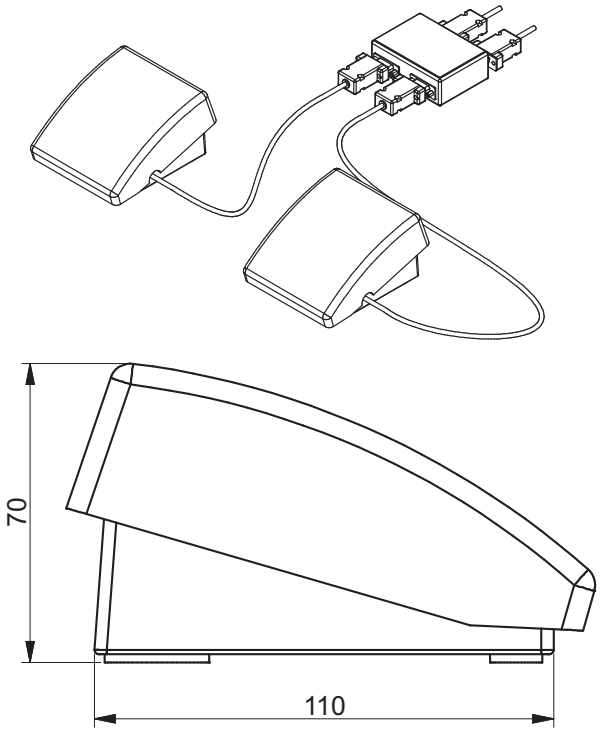


Foot button, by pressing it, sends to scale commands TARE or PRINT (print weighing result).

It allows for performance of complex procedures for weighing, filling and dosing with two hands involved in this procedure, and simultaneous tarring, printing and sending the result to computer. Proper cooperation of the system: scale – computer – PRINT button – TARE button; is provided by signal distributor also included in the set of buttons.

Set of TARE or PRINT buttons is applicable for laboratory weighing instrument by RADWAG equipped with graphic display and RADWAG industrial scales applying indicators or terminals series: TMC and HX.





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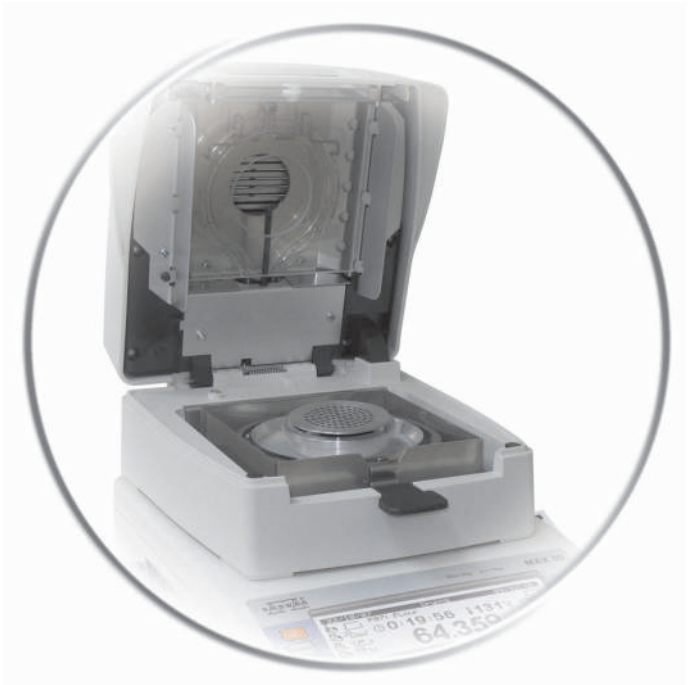
SET FOR DETERMINATION OF WATER VAPOUR PERMEABILITY

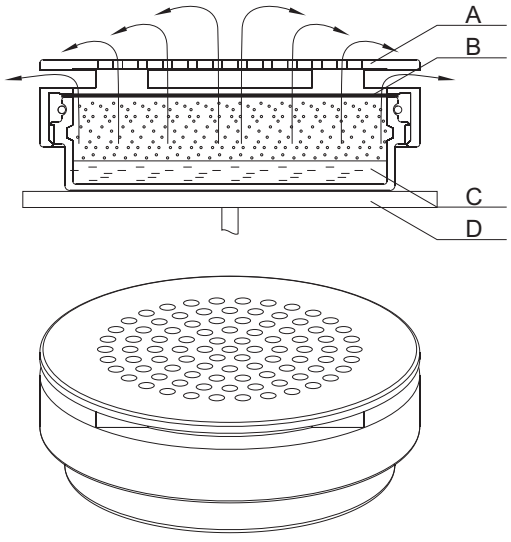
Permeability of water vapour is a feature which directly determins quality and application of a specific material, for instance cloth, shoes. Improper material if applied, may result in unhealthy or uncomfortable use.

In order to determine content of water vapour, moisture analyzer is equipped with special vessel.*
Developed method of permeability of water vapour is based on locating adequate amount of water in special vessel made of aluminum alloy, on which the cut-out sample is clamped.
Vessel with properly calculated amount of water and a piece of cloth cut with blanking tool is placed in drying chamber of a moisture analyzer.**

Before that, the vessel is kept for 24 hours in stable climate conditions. Than, as the vessel is in drying chamber of moisture analyzer, it is dried in temperature 140 °C. Big advantage of this procedure is very short sampling time (overall approximately 50 minutes, whereas standard method takes approximately 72 hours!).

Results of those analysis are given in mg of $H2O/1000mm^2/24h$ or by percentage ratio of amount of water vapour transmitted through material to amount of water vapour transmitted without examined material.





A – vessel lid
B – sample
C – water
D – moisture analyzer weighing pan

* registered in PO No W 116646
** registered in PO No P 381787

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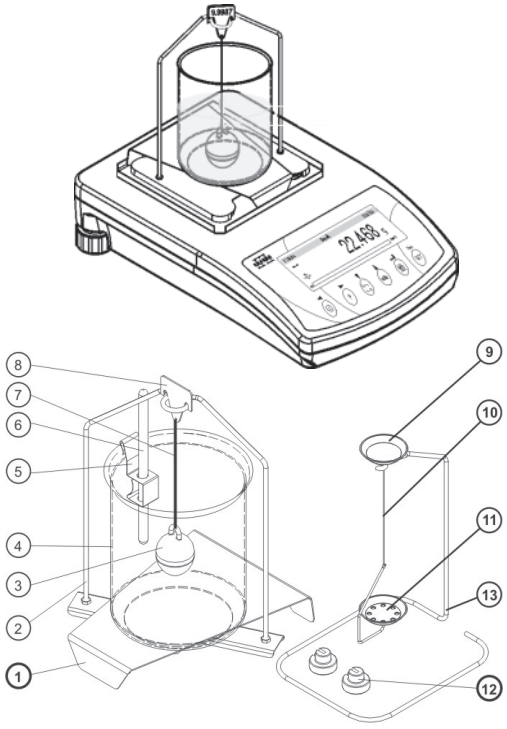
DENSITY KIT

Determining the density of solids and liquids is an inseparable part of work of the laboratories. Traditional method of density determination requires from the operator many measurements and a lot of complex calculation. In result the operator ends with a density determination result which can be saddled with calculation and systematic errors. Additionally time that needs to be devoted to density calculation is long. In case of determining the density of solids and liquids with application of Radwag density determination kit, the whole procedure is very much simplified and speeded up. Time till the operator receives the density measurement is very short, as all the calculation is performed by the software of the weighing instrument, and operator's activities is limited to:
- operation of the keyboard of weighing instrument,
- placing the samples on the weighing pans of the kit,
- hanging the plunger.

Density determination kit is additional equipment offered to Radwag laboratory balances. The software for determination of density has following basic features:
-simplicity of usage (all activities are described on the display of the balance),
-reliability (all calculation is automatically performed by the balance's software),
-fast data processing (result is obtained after determination of sample mass in water or plunger mass in liquid),
-accurate data processing (before every measurement of mass, display indication is automatically zeroed, this proves the density determination result to be reliable and real).

Specification:

1-beaker base
2-pans suspension
3-plunger
4-beaker
5-thermometer holder
6-thermometr
7-plunger string
8-hook
9-upper pan of the set for density determination of solids
10-pan string
11-lower pan of the set for density determination of solids
12-additional weight
13-additional stand for set of pans or plunger



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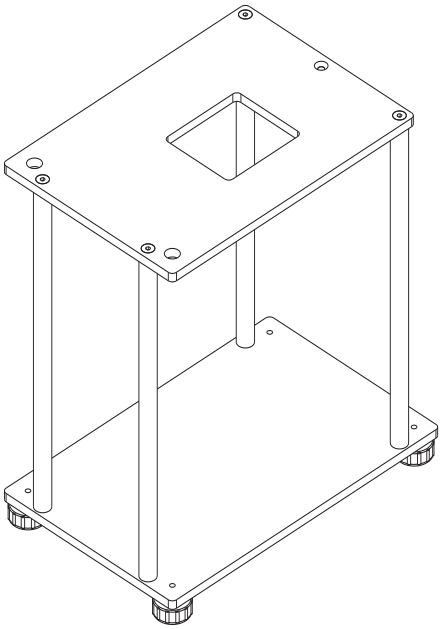
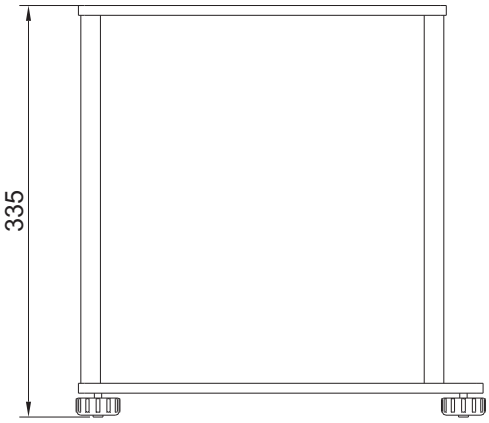
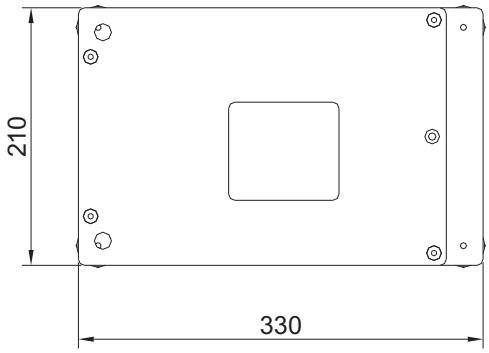
STAND FOR UNDER HOOK WEIGHING

Stand for weighing loads in under hook weighing method. Loads are placed on special pan hanged on a hook mounted to the bottom of the scale.

Application of a stand is recommended when measuring mass of magnetic materials, materials with non-standard dimensions or shapes. Measurement with application of the stand is in most cases more precise, as it eliminates the possibility of not ideal placing of the load on a weighing pan and in result it decreases the possible measuring error.
Additionally, stand is applicable for determination of density of solids and liquids.







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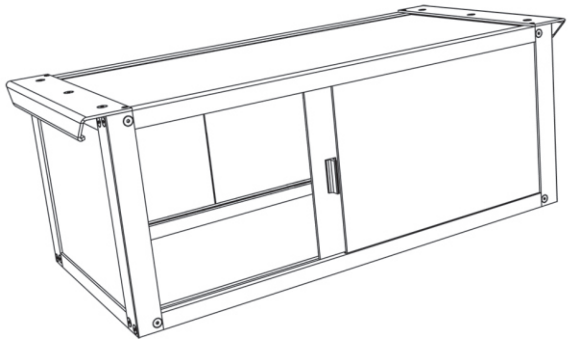
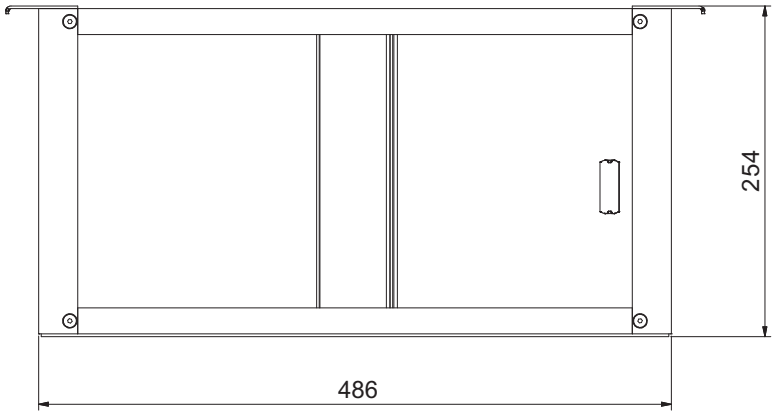
ANTIDRAUGHT SHIELD FOR MICROBALANCES

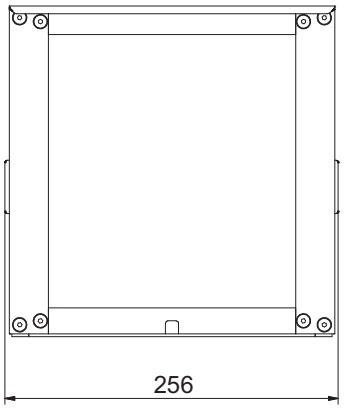
Anti-draught chamber is intended for microbalances.

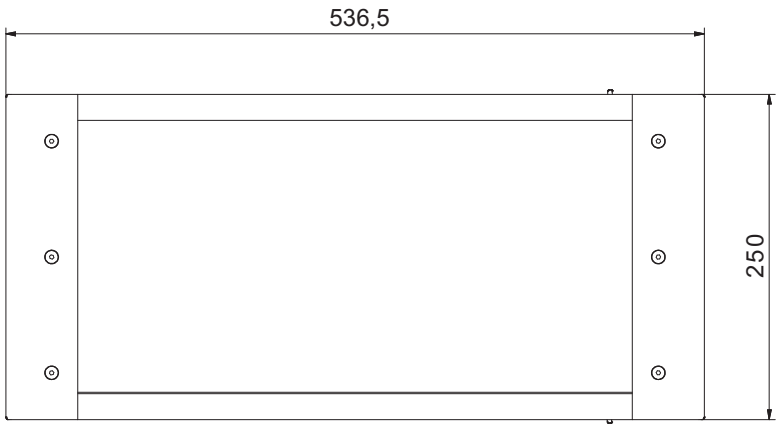
It is an optional equipment of microbalances working in unfavourable conditions (air-draughts and breezes)

It is mounted on a table,a microbalance is placed inside a chamber. It features sliding side windows allowing for free access into the weighing chamber of a microbalance.









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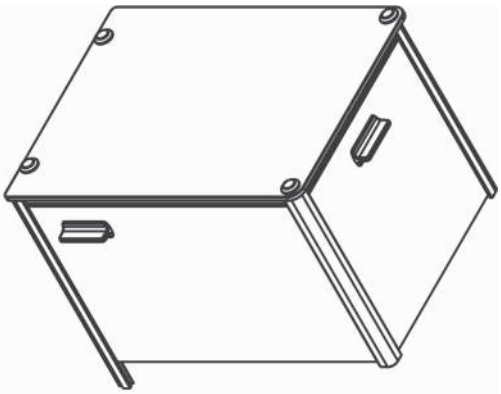
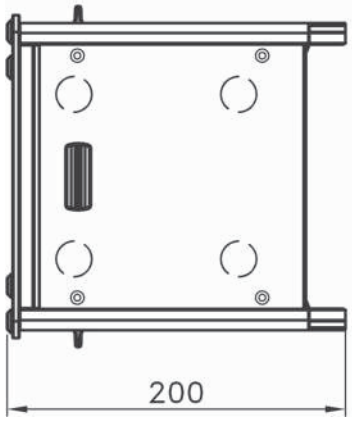
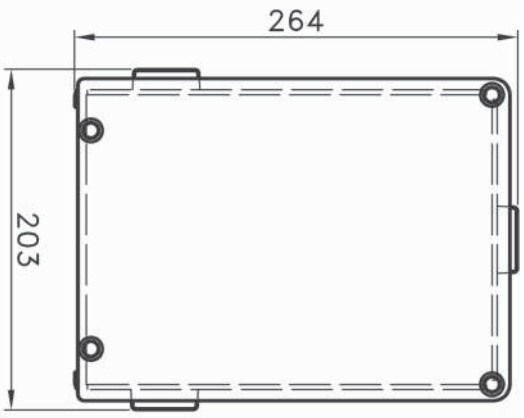
ANTIDRAUGHT SHIELD

The antidraught shield can be used for protecting the weighed objects against external environment, especially wind or breeze in production halls. It is additional equipment to the balances series WPS, WPX with pan size 128×128mm.

Protecting the weighed objects against wind has very good influence of measuring results. It eliminates the possibility of vibration of an object caused by external conditions while taking its measurements.







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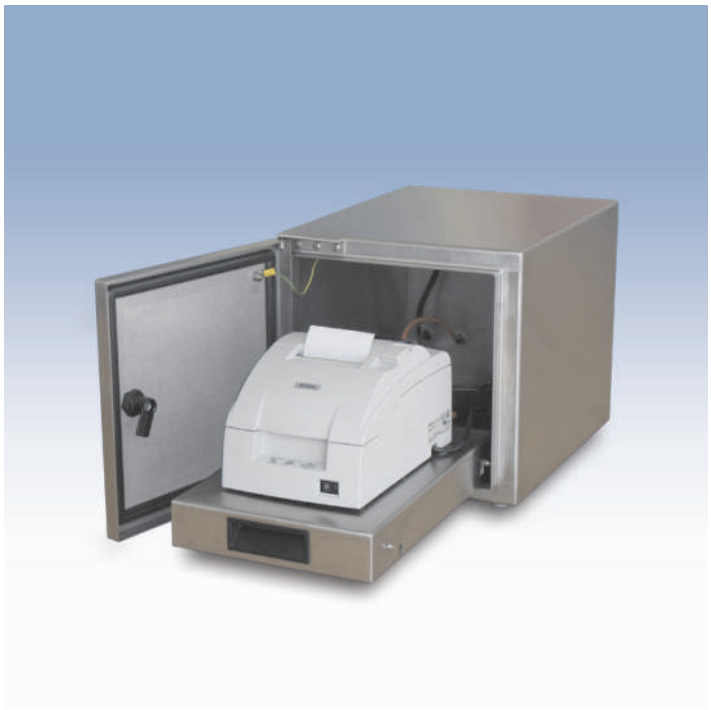
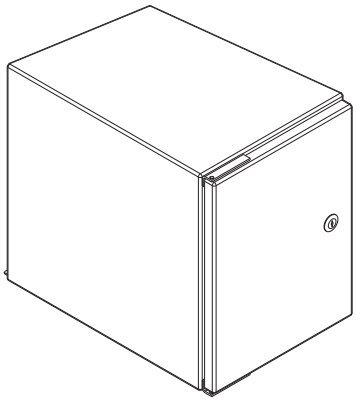
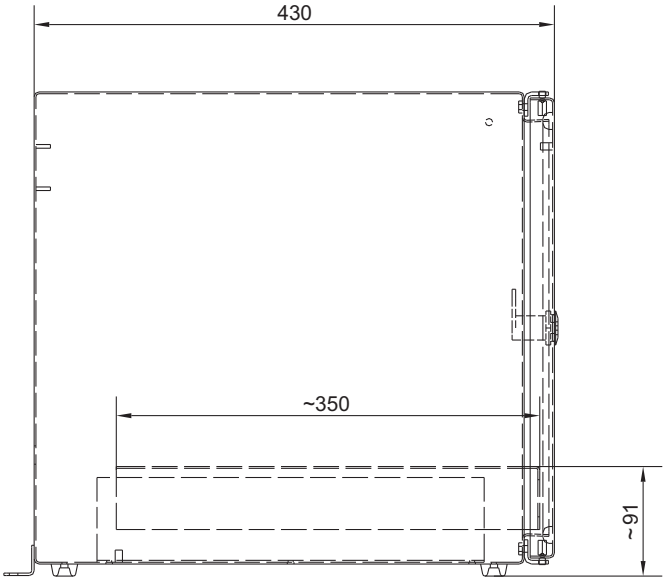
ANTI DUST SHIELD FOR PRINTERS



Anti dust shield is applicable as protection to printers series Epson and Citizen models CLP 521 and CLP 621.

It is used in cases, where a printer is operating in heavily dusted areas. Such airtight shield protects a printer against defects, and allows for operation in not adapted places.





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CEREAL DENSITY KIT

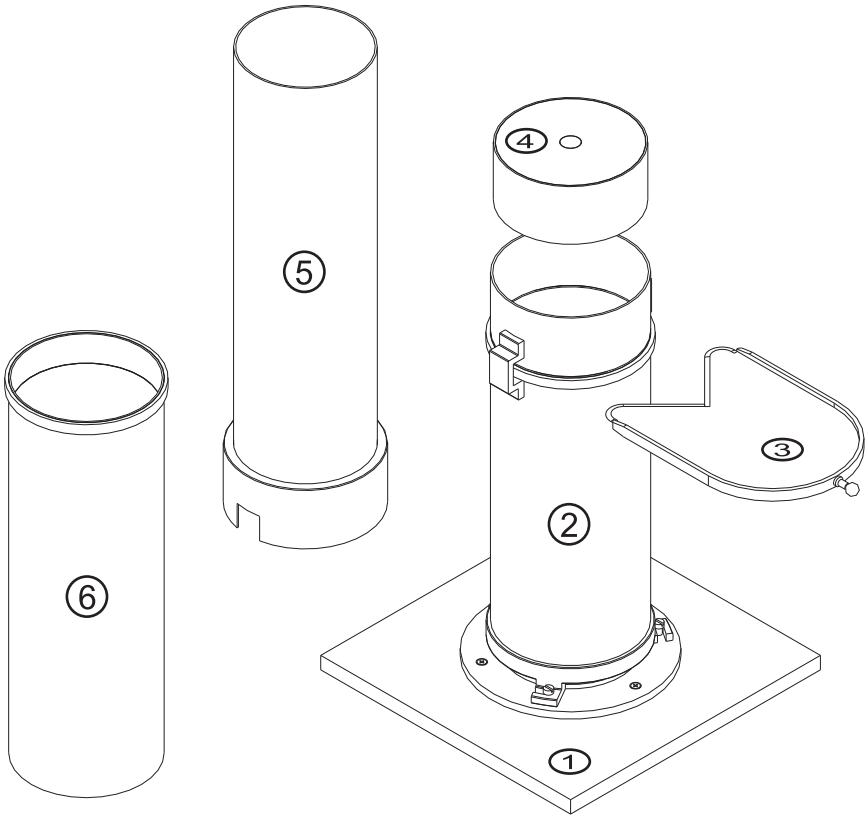
This kit is designed for determination of density of cereals. Measurement of cereal density in loose state is performed with application of precise balance series WPX 4500/G and density kit for cereals. Density determination result is calculated automatically by balance software (in accordance to tables containing cereal density).
It is possible to determine the density of following cereal: wheat, oats, barley, rye.

Manufactured of brass, the density kit is additional equipment to a balance. Its volume is 1 liter.

The cereal density kit allows for determination of density according to norm: PN-73/R-74007.

CEREAL DENSITY KIT

1-base for measuring container
2-measuring container of 1 l volume
3-knife
4-ring
5-filling device
6-charging vessel



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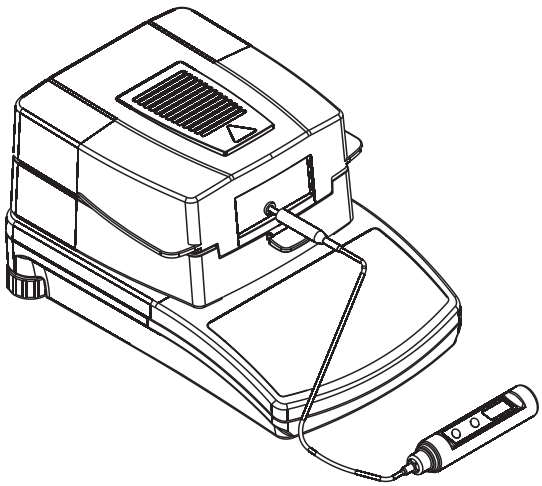
CONTROL THERMOMETER PT-101

•pocket thermometer designed for temperature determination by a sensor without cable or a sensor on cable.
•depending on the requirements it is possible to choose between sensor with smaller or bigger accuracy.
•exchange of the sensor does not require calibration – electronic storing of factory calibration on the head.
•sensors are built into a stainless steel tubes with diameter 3mm.
•tip of the sensor can be finished as sharp edge or flat.
•sharp sensors can be equipped with a transverse handle.
•cables: silicon or with strengthening steel braid.
•fully waterproof casing.
•automatic switch off as prevention against battery discharge.
•"HOLD" function (holding the result on the display).
•power supply by batteries 3 x 1.5V (LR44).
• CE marking

Control of reliability of temperature indications
Based on checking whether the temperature inside the drying chamber is the same as the temperature displayed on the moisture analyzer display. Control is performed with attested thermometer PT 101. It is an additional equipment offered to each moisture analyzer. It should be noted here, and remembered, that both thermometers control the temperature of air with small distance from controlled sample.



Factor correcting the temperature of drying
Materials with dark colour have special drying effect causing absorption of heat. In such case it is possible that the sample will be overheated, and so if the drying temperature has been set for 120°C the dark coloured sample absorbs heat and reaches temperature about 135°C. In such case, the temperature correcting factor should be determined. Determination of this parameter should be done with control thermometer with a probe (additional equipment to a moisture analyzer).

Specification:

Measuring range	-70 ÷ 130 °C * -70 ÷ 400 °C **					
Resolution	in range -70 ÷ 199.9 °C — 0.1 °C, above 199.9 °C — 1.0 °C					
Accuracy depending on the class of sensor accuracy	range	-70 ÷ 0 °C 0 ÷ 100 °C 100 ÷ 200 °C 200 ÷ 400 °C	Pt-1000B	±0.9 °C ±1.0 °C ±1.5 °C ±3.0 °C	Pt-1000S	±0.9 °C ±0.3 °C ±1.5 °C ±3.0 °C
Mass	75 g					
Dimensions	l = 143 mm, o = 26 mm					
Power supply	batteries LR44 x 3					

* sensor without cable ** sensor with cable

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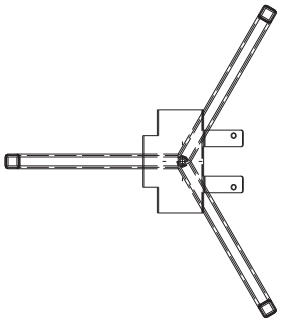
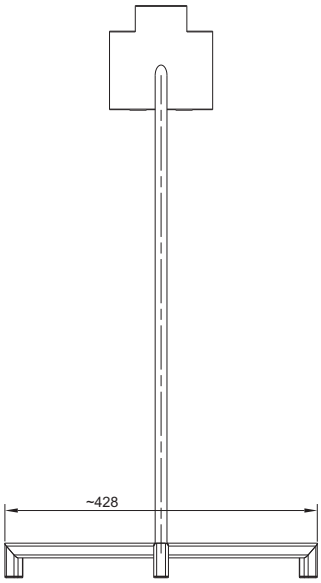
RACK FOR MEASURING INDICATOR

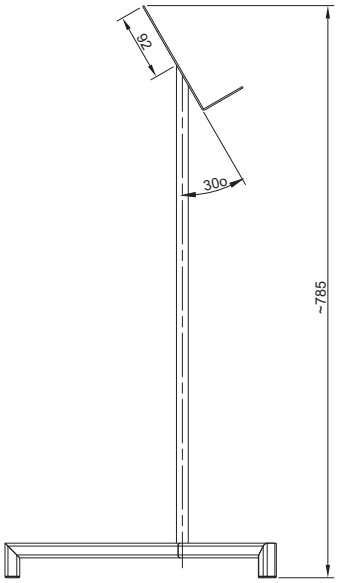
Rack for measuring indicator allows for easy operation and easy reading of the weighing results from scale. Easy arrangement (within the range of cable length) allows for operation of scale with no limitation to platform access, and in result simplifies placing the load on the weighing platform.

Handle of the measuring indicator in moveable in vertical direction for easy reading and operation of the indicator. Construction of the rack also simplifies the installation and de-installation of the indicator.

Triple legged rack provides stable base independently on the surface on which the rack is placed. The distance between the legs secures the rack against overturning even while operating the indicator.







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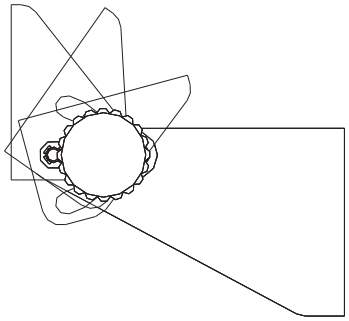
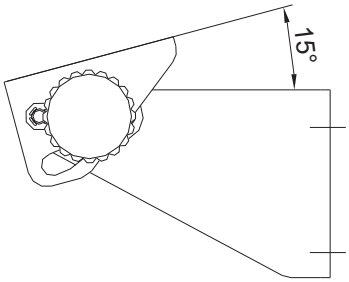
HANDLE FOR INDICATOR IN PLASTIC CASING

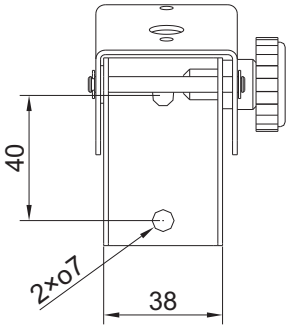
Handle is used for mounting the indicator series PUE C31 on wall.

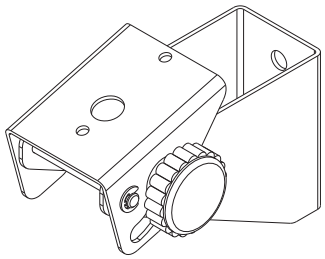
Simple mounting solution allows for installation of the handle on any horizontal and vertical surface. (preferably vertical surface with little deviation from the exact verticality).

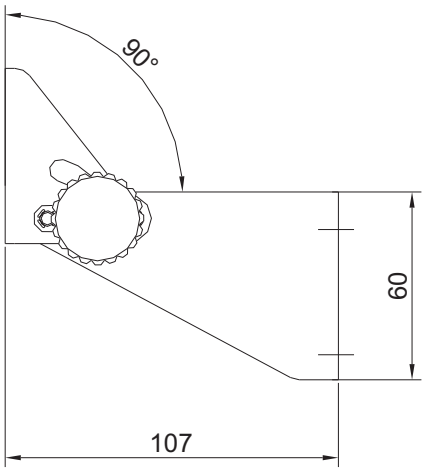
The base of the handle enables changing the angle of indicator installation in wide range, according to user requirements. It is manufactured in mild steel technology, adjusting the position by big handwheel made from plastic.

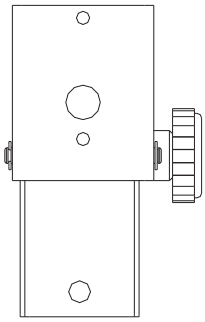


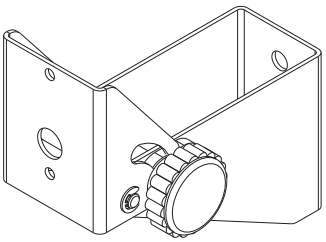












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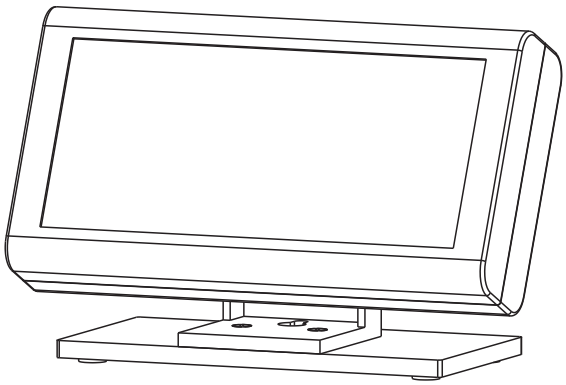
ADDITIONAL DISPLAY

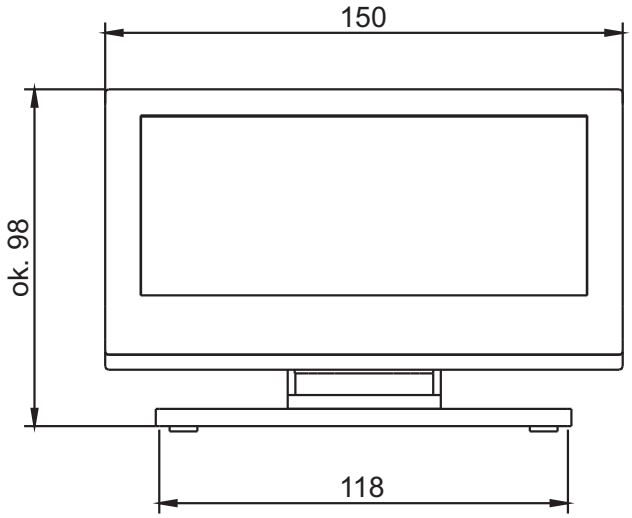
Additional display WD-4/1 in cooperation with measuring indicator series PUE C/31. Data displayed on the additional display are identical to those presented on the indicator of weighing instrument. WD-4/1 :
ABS plastic casing, cable with input DB9.

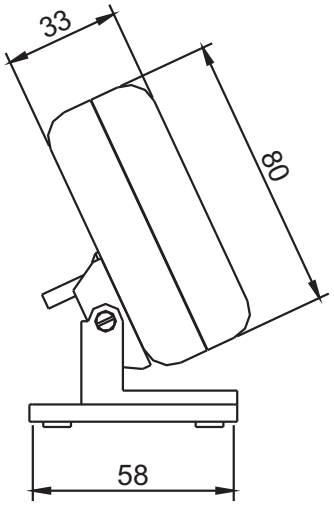
Basic features:
- automatic detection of speed of transmission
- automatic switch off
- LCD backlight
- power supply from measuring indicator (scale)

Additional display WD-3/01 in cooperation with scales PS, PS/X, XA/X, AS/X, AS, APP and APP/X.

Basic features:
- automatic switch off
- LCD backlight
- power supply from measuring indicator (scale)







Specification:

Power supply	6V DC from measuring indicator (scale)
Digit size	19 mm
Connection cable length	1,5 m
Dimensions	150 × 80 × 33 *

* dimensions do not include cable chokes and holders for mounting

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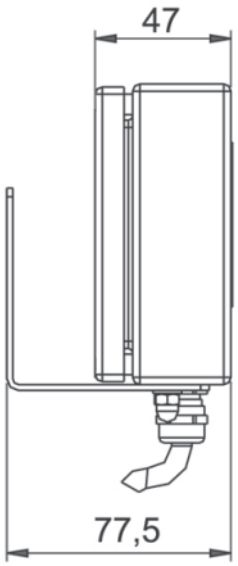
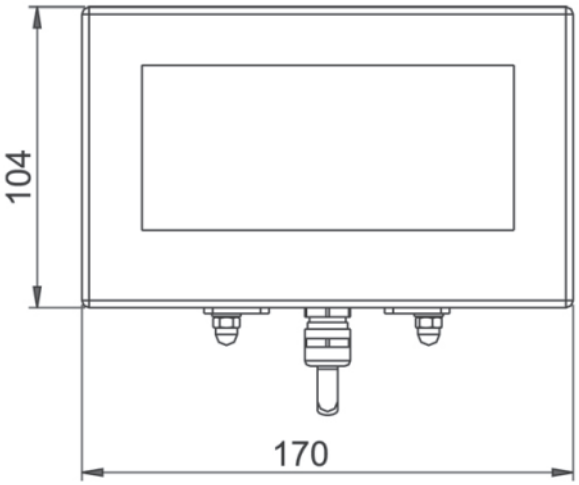
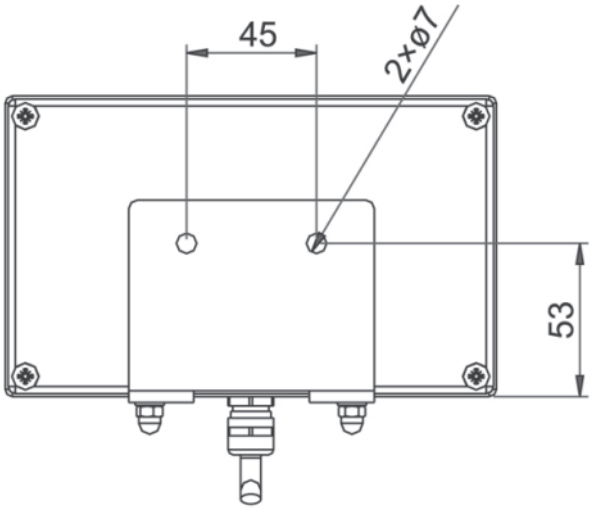
ADDITIONAL DISPLAY WD -4/3

WD-4/3 : stainless steel casing, cable with 4pin input (IP67) for cooperation with measuring indicator series PUE C/31H, PUE C/31H/Z

Basic features:
- automatic detection of speed of transmission
- automatic switch off
- LCD backlight
- power supply from measuring indicator (scale)







Specification:

Power supply	6V DC from measuring indicator
Digit size	19 mm
Connection cable length	1,5 m
Dimensions	170 × 104 × 47 *

* dimensions do not include cable chokes and holders for mounting

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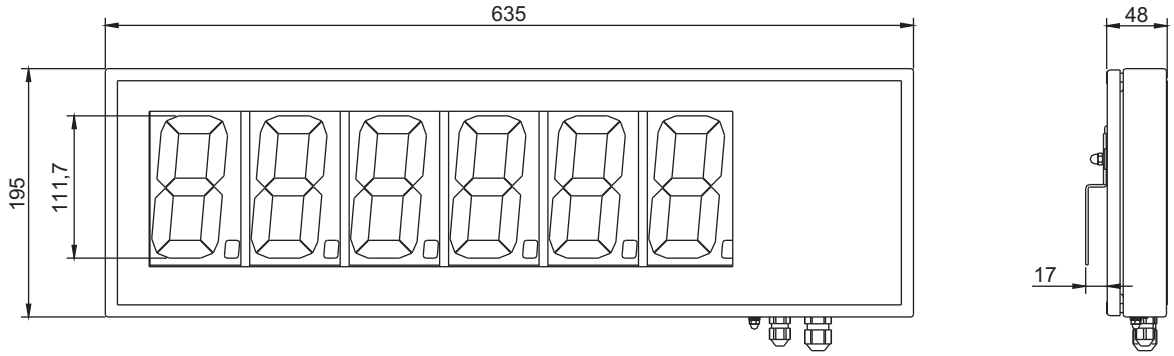
LARGE ADDITIONAL DISPLAY WWG-2

Additional large size LCDs on stainless housings. 6 digits 4.5" (11.2cm). They are equipped with holders that can be used as a basis for standing it on a table or hanging on a wall. They are intended for cooperation with weighing indicators and terminals: PUE C/31H, PUE C41H, TMC, PUE 5.

LCD LED backlit, stainless steel housing. Communication with indicators and scales via RS232, RS485 or optionally Ethernet. Depending on the version power supply 230VAC or 7-24VAC.

Different makes:

- WWG-2/1: RS485, supply 7-27VAC. Main intended use with TMC terminals for vehicle scales
- WWG-2/2: RS485, supply 230VAC. Intended use with PUE C41H for operation in the distance of more than 10 m from the terminal
- WWG-2/3: RS232, supply 230VAC. Intended use with PUE C/31H. Maximum cable length of RS232 is 10m
- WWG-2/4: RS232, supply 230VAC. Intended use with PUE C41H or PUE 5. Maximum cable length of RS232 is 10m
- WWG-2/5: Ethernet, supply 230VAC. Intended use with scales equipped with the Ethernet interface



Specification:

	WWG-2-1	WWG-2-2	WWG-2-3	WWG-2-4	WWG-2-5
Casing	stainless steel				
Digit height	4,5"				
Intended for	TMC	PUE C/41H	PUE C/31H	PUE C41H, PUE 5	PUE C41H, PUE 5, TMC
Interface	RS 485	RS 485	RS 232	RS 232	Ethernet
Connection	gland	connector	connector	connector	connector, gland
Transmission cable lenght	up to 150 m	5 m (option max 150m)	3 m (option max 10m)	3 m (option max 10m)	3 m
Power supply	7-24 VAC	230 VAC	230 VAC	230 VAC	230 VAC
Operation temperature	-10 ÷ 40°C				
Interface	IP 66/67				
Dimension without handler	635×195×48 mm				
Net weight	5,5 kg				

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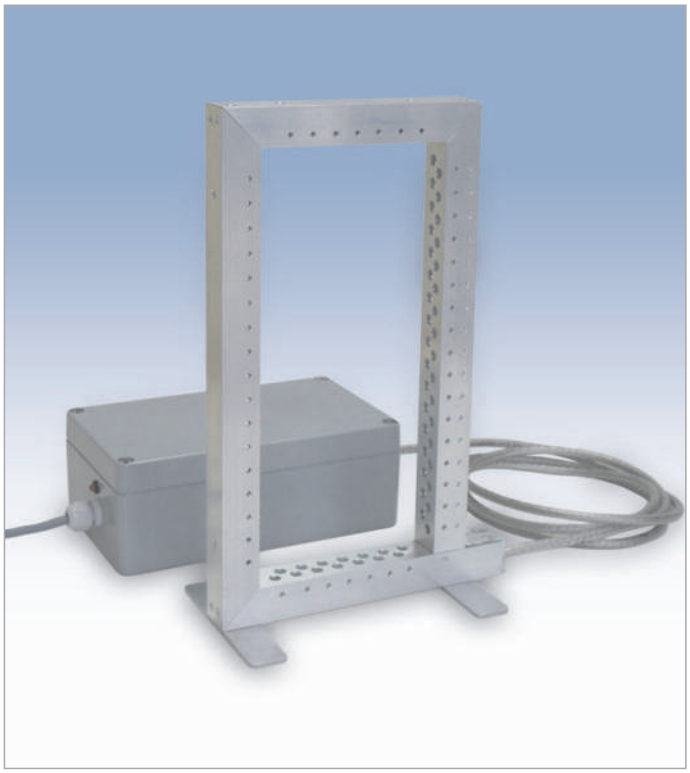
ULTRASONIC AIR IONIZER DJ-01



Antistatic ionizer is a device that removes surpluses of ions, mostly positive ones, but also negative ones from weighed product, balance elements and its surrounding. Deionization is about air molecules electric charge neutralizing, which helps restore quasi-balance of positive and negative ions.

Unbalance of positive and negative ions In air is mostly the reason of undesirable electric influences (attraction or repulsion) on elements that are close to each other. The phenomenon is intensified if materials that do not conduct electricity are used (plastics, glass).

Because balances contain such materials, the problem influences their operating meaningfully. The influence occurs as multiplied repeatability error and often as multiplied indication error.

Most often unfavourable electrostatic interactions phenomenon takes place In surroundings where there is low relative humidity, that is below 40%. Antistatic ionizer DJ-01 is a device that meets all requirements of valid directives.

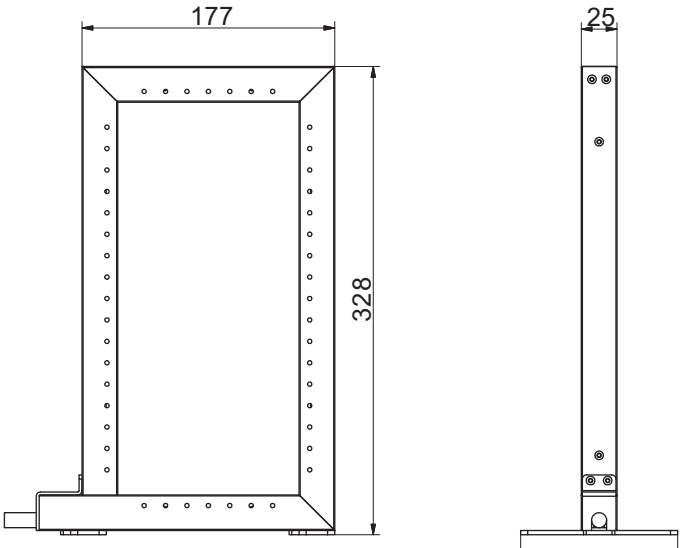
It draws very low power (below 1W), removes surpluses of both positive and negative ions from air, its shape and structure enables easy adapting it to optional analytical balance or microbalance.

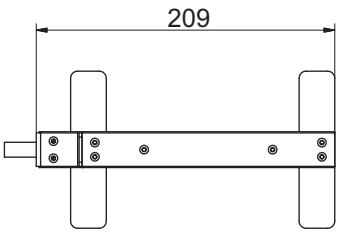
For tens of years scientific researches have been intensively carried out on air ionic composition. On their basis it has been stated that the factor, among temperature and air humidity, should be treated as significant climate parameter.

Main source of energy that ionizes atoms and gas molecules that are present In air, is radiation emitted by radioactive elements which can be found in air and lithosphere. In man surrounding, ions can be created mostly as a result of electrical and heating devices operating.

It is generally accepted that both signs light ions optimal content should be equal to 1000 pieces in 1 cm^3 of air. Such conditions can be found on sea coasts, in forests, where positive and negative ions amounts are similar.

In fact there is slight predominance of positive ions over negative ones In our environment.





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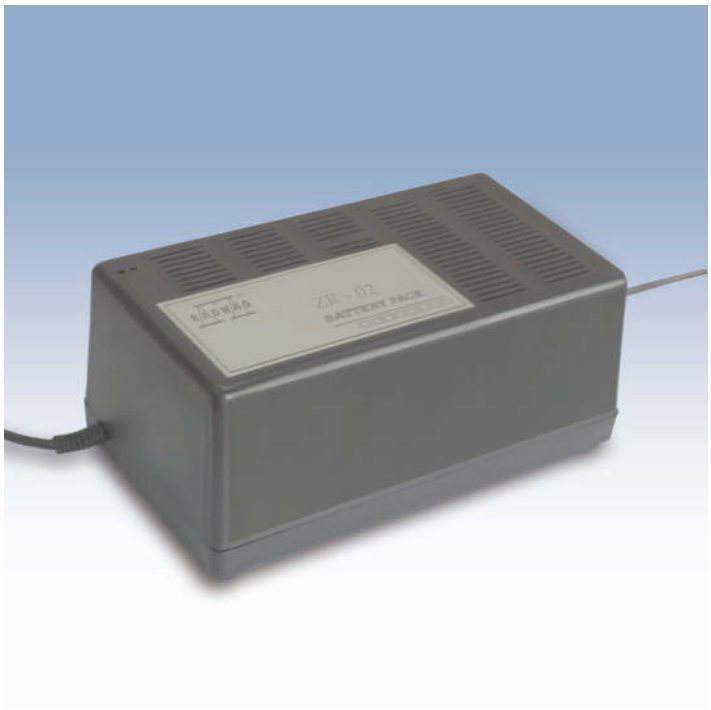
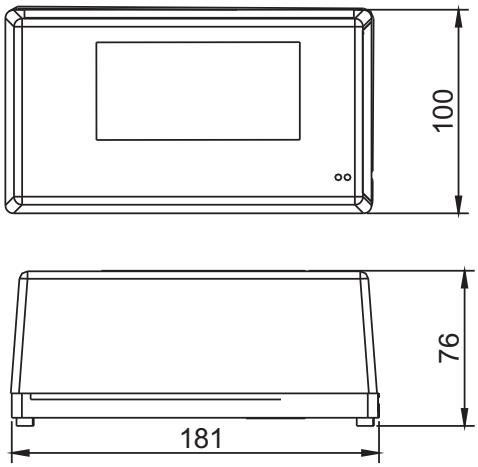
POWER ADAPTER WITH BUFFER ZR-02





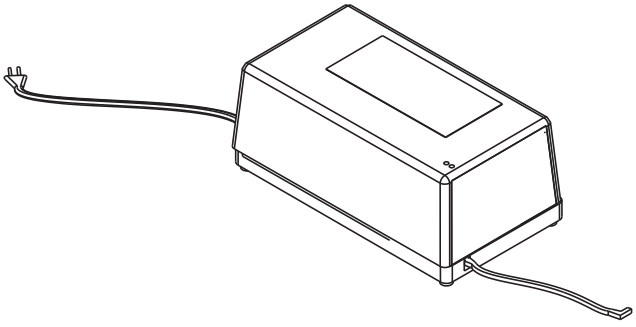
This power adapter allows for sustaining power when power supply is decaying. It includes built in accumulator and microprocessor controlling. Power adapter can operate in buffer mode and in cycle mode. Buffer mode: - simultaneous charging the battery and power supply to the weighing instrument – cycle mode:
- operation with no connection to mains 230V, power supply to weighing instrument from built in accumulator.

Power adapter status is signalized by two LED diodes
•green LED diode pulsating Cycle operation mode, accumulator charged, and sustained with low power supply
•green LED diode flashing constantly Accumulator charging or its sustaining in buffer operation mode
•red LED diode pulsating Power consumption from battery with 230 V AC mains not connected.
Battery with sufficient power reserve.
•red LED diode flashing constantly and periodically sound is heard Power consumption from accumulator with 230V AC mains not connected, batery discharged, charging required (connect to mains 230 V AC).
•red and green LED diodes flashing constantly and periodically sound is heard (during charging).
Fuse of the accumulator defected •no diode is flashing Power adapter not connected to 230 V AC mains and no power consumption from accumulator.

Estimated time of operation of weighing instruments powered from accumulator (in surrounding temperature 20°C):

Specification:

Power supply	230V AC
Anti fire prevention class	II
Maximal power consumption	18VA
Power on output	10 ÷ 15V
Constant resisting power in buffer mode	450mA
Constant resisting power in cycle mode	340mA
Operation temperatures	0 ÷ 40°C
Accumulator	12V 3,4Ah
Accumulator protection	polimeric fuse
Fuse	T200mA/250V
Dimensions	181 × 76 × 100
Total weight	2,2kg



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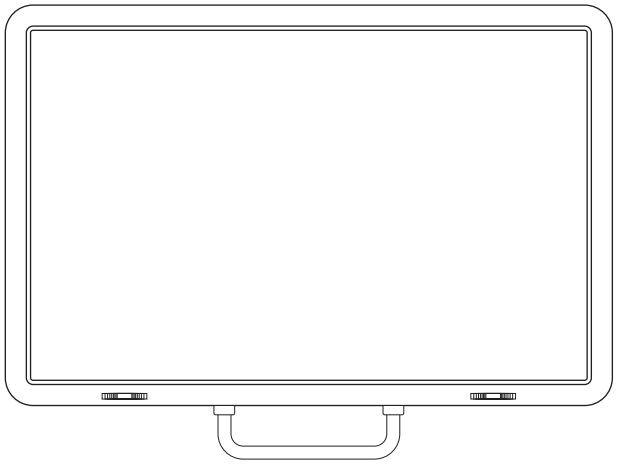
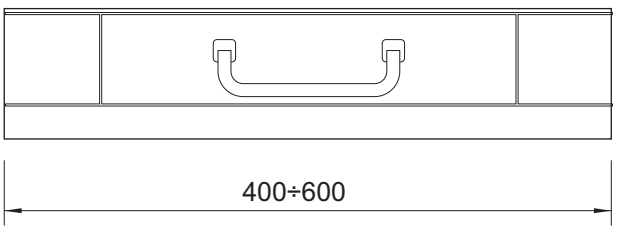
SUITCASE FOR SCALE

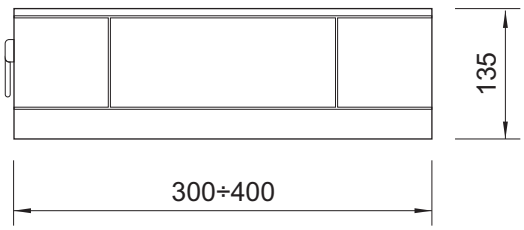
Special design providing protection for weighing instrument while transporting to location. Durable for shocks (aluminum construction with internal filling from polyurethane foam).

Manufactured in two versions:
- W1 for balances: WPX, PS xx/C2, PS xx/C1, WLL xx/A2, WLC xx/A1, WLC xx/A2 - with pan size: 195×195 mm.

- W2 for balances: WLC xx/C1/K, WTC xx/C1/K, WLL xx/C1/K - with pan size 290×360 mm.







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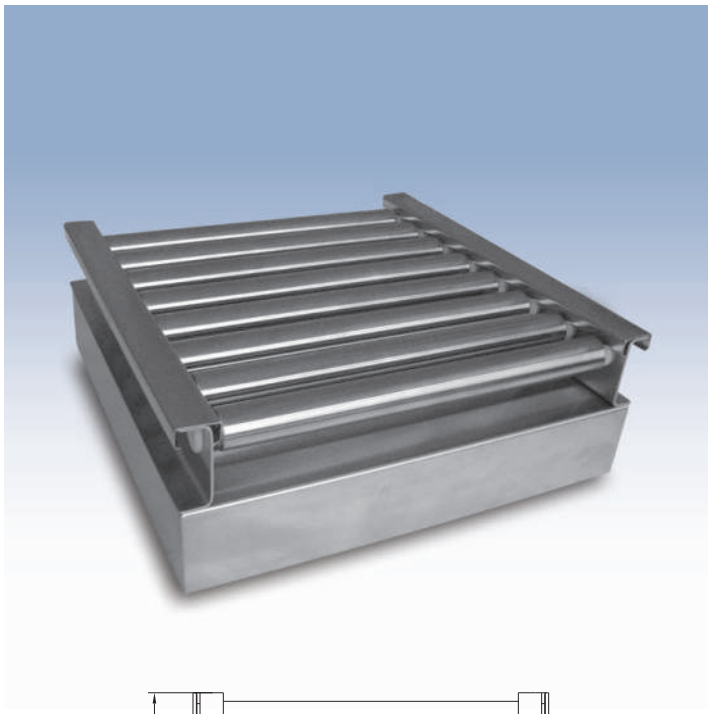
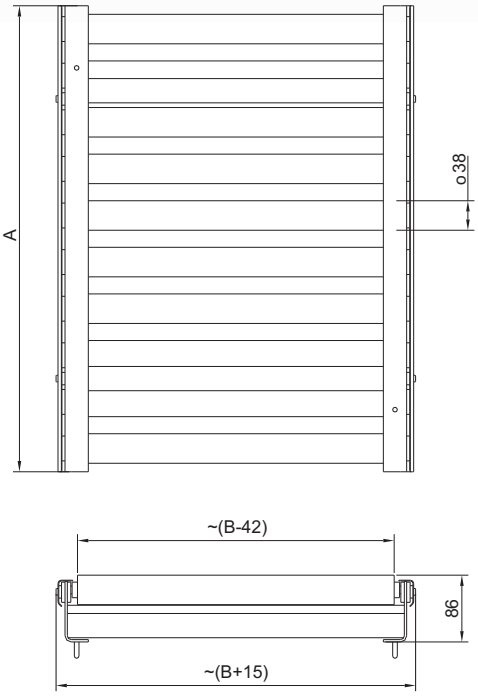
ROLLER CONVEYORS

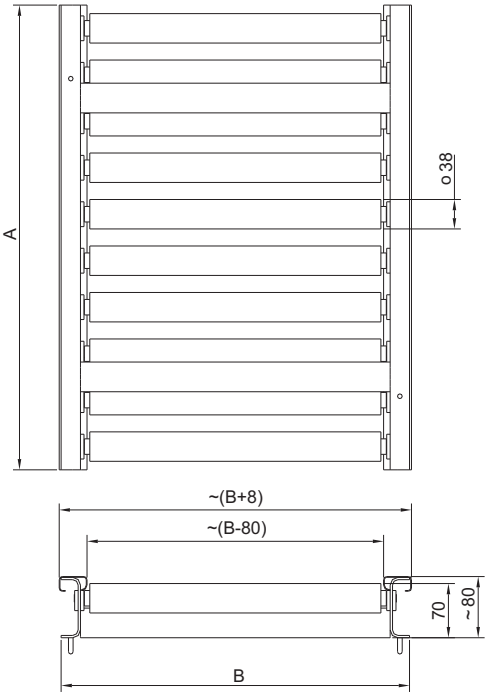


Base with rollers manufactured in stainless steel Versions of stainless steel rollers suitable for scales:
H1 – for stainless steel scales with platform size 250×300
H2 – for stainless steel scales with platform size 410×410
H3 - for stainless steel scales with platform size 500×500
H4 - for stainless steel scales with platform size 600×600

Offered in two options: with / without limiters.



without limiters



with limiters

Specification:

	Version H1	Version H2	Version H3	Version H4
Material for	stainless steel	stainless steel	stainless steel	stainless steel
Pan size	250×300	410×410	500×500	600×600
Dimension **A**	300	410	500	600
Dimension **B**	250	410	500	600

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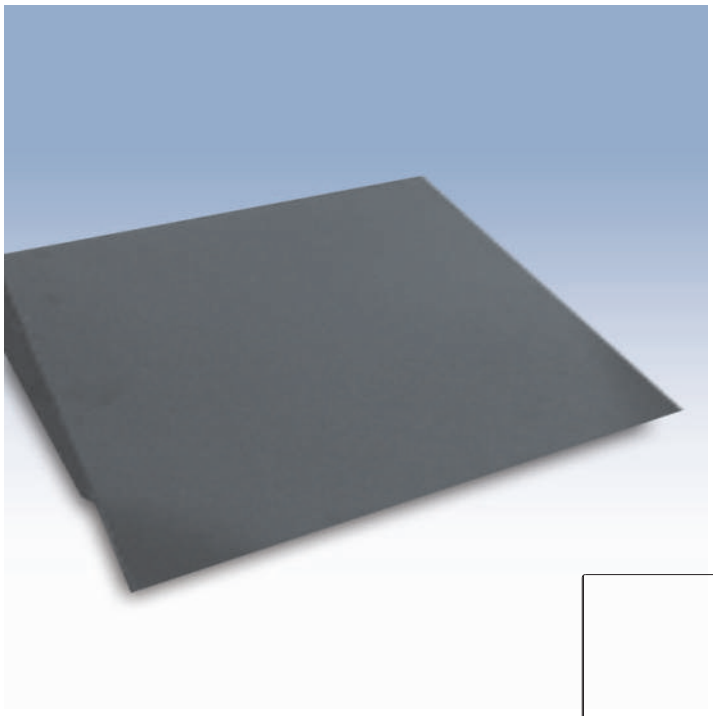
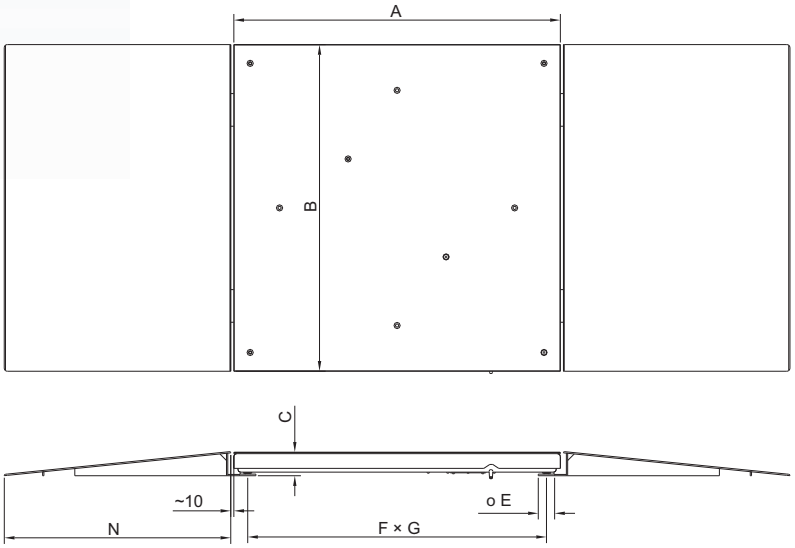
RAMPS FOR LOW PROFILED SCALES



Ramps are used for easy placing the trolley with load on the low profiled scales. This solution allows for installation of the scale in production line as a measuring or control stand. Easy loading and unloading the platform assures smooth control and operation with very much shortened time devoted to load movement.

Because of very low height of the ramps, they should be used only with low profiled scales. Angle of ramp inclination is also adjusted to low platform height (the higher platform, the longer the ramps). The reason is that loads with high mass can not be driven to the weighing platform through steep inclination.



Specification:

Platform capacity	platform A×B	C	E	F×G	N
150 kg	800×800 mm	57 mm	40 mm	736×736 mm	~540 mm
150 kg	1000×1000 mm	57 mm	40 mm	915×915 mm	~540 mm
150 kg	1200×1200 mm	57 mm	40 mm	1136×1136 mm	~540 mm
300 kg	800×800 mm	59 mm	40 mm	736×736 mm	~560 mm
300 kg	1000×1000 mm	59 mm	40 mm	936×936 mm	~560 mm
300 kg	1200×1200 mm	59 mm	40 mm	1136×1136 mm	~560 mm
600 kg	800×800 mm	74 mm	50 mm	715×715 mm	~695 mm
600 kg	1000×1000 mm	74 mm	50 mm	915×915 mm	~695 mm
600 kg	1200×1200 mm	79 mm	50 mm	1115×1115 mm	~745 mm
600 kg	1500×1500 mm	79 mm	50 mm	1415×1415 mm	~745 mm
1000 kg	800×800 mm	74 mm	50 mm	715×715 mm	~695 mm
1000 kg	1000×1000 mm	74 mm	50 mm	915×915 mm	~695 mm
1000 kg	1200×1200 mm	79 mm	50 mm	1115×1115 mm	~745 mm
1000 kg	1500×1500 mm	79 mm	50 mm	1415×1415 mm	~745 mm

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BAR CODE SCANNER LS2208

The LS 2208 scanner combines excellent scanning performance and advanced ergonomics to provide the best value in a lightweight laser scanner. Whether used as a hand-held scanner or in hands-free mode in a stand, the scanner ensures comfort and ease of use for extended periods of time.

Specification:

	LS 2208
Power supply	5V DC from terminal (scale)
Light source	VLD 650 nm
Scanning system	laser diodes
Speed of reading	100 scans/sec
Reading distance	0÷58,4 cm
Ray shape	single line
Working temperature	$0 \div 50^{0}$
Read bar codes	Code 128, UCC/EAN-128, UPC-A, EAN/JAN-13, Codabar, Code 39/Code 32, Standard/Industrial/Interleaved/Matrix 2 of 5, IATA, Code 11, MSI/Plessey, Telepen, German Postal Code
Interface	RS232
Scanner dimensions	84×63×152
Scanner weight	146g without cable

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BAR CODE SCANNER POWERSCAN D8330

Power scanner D8330 is a handheld device designed for exploitation in hard industrial conditions.
It is compatible with:
- PUE C41 H
- PUE 5
- TMC

Versions:
D8330 - Standard
D8330 AR – Increased Reading Range

D8330 features new technology 3GL (three green lights) which results in excellent reading parameters. Patented “Green Spot” directly in the code and double red diodes on the surface and underneath the cover facilitate higher clarity of information under various user accounts. High reading parameters are enhanced by patented PuzzleSolver – technology of fast and precise standard reading. The mechanics of D8330 has been developed and tested against extremely hard environmental conditions, maintaining stable reading throughput and reliability. The ergonomic casing is light and well-balanced to ensure optimal comfort of operation. Built-in metal hook designed for the use in a suspended position facilitates higher work throughput of a workstation.
Multiple interfaces: RS 232, keyboard, Wand Emulation and USB make it a versatile device.

Specification:

	PowerScan D8330
Recognized bar codes 1D	automatic recognition of standard codes including GS1 Databar Linear Codes
Stacked codes	Code 16K, Code 49
Power consumption	420mA for 4V, 310mA for 5V, 62mA for 30V
Stand-by power consumption	4mA
Supply voltage	4-30V DC
Drop resistance	withstands 50 drops from 2m
ESD resistance	20kV
Maximal humidity (without condensation)	90%
Operating temperature	-20°C to 50°C
Storage temperature	-20°C to 70°C
Interface	RS232, USB, Keyboard Wedge, Wand,
Dimensions	207×114×69mm
Weight	Weight: 295g
Minimal print contrast ratio	15%
Maximal reading speed	35 ± 5 scans/sec
Resolution	0,076mm for version AR 0,19m

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BAR CODE SCANNER POWERSCAN M8300

Power scanner M8300, M8300D is a handheld device designed for exploitation in hard industrial conditions. PM 3800 – wireless scanner is the most advanced product. Narrow-band wireless communication enables higher throughput and flexibility at a workstation. Furthermore, it creates new possibilities of scaling solutions – from a single workstation to network systems.
It is compatible with:
- PUE C41 H
- PUE 5
- TMC

The scanners are available in the following versions:
M8300 standard
M300 D with a display
M300 AR increased reading range
M300 D/AR with a display and increased reading range

Specification:

	PowerScan M8300
Wireless communication	DATALOGIC Star Cordless System
RF signal strength	433,92MHz - <10mW, 910MHz - < 1mW
Maximum number of scanners in the range	2000
Maximum number of scanners for one base station	21
Frequency	433,92Mhz 910Mhz
Range (open space)	up to 50m for 433,92 EUR, to 30m for 910Mhz
Recognized bar codes 1D	automatic recognition of standard codes including GS1 Databar Linear Codes
Stacked codes	Code 16K, Code 49
Accumulator	Li-ION 2150 mAh
Charging time	external charger – 4 hours, base charger – 10 hours
Number of scans on a single charge	60 000
Information diodes	discharging-red, charging finished – green, power supply / data connection – yellow
Power consumption	1A dla 10V, 330mA for 30V, POT 500mA
Supply voltage	10-30V DC, POT 5V DC ± 10%
Drop resistance	withstands 50 drops from 2m
ESD resistance	20kV
Maximal humidity (without condensation)	90%
Environmental protection	IP65 for M8300, IP64 for M8300D
Operating temperature	-20°C to 50°C
Storage temperature	-20°C to 70°C
Interfaces	RS232, USB, Keyboard Wedge, Wand, RS485 (only with base station BC8060)
Dimensions	base – 240×108×95mm, M8300 – 207×114×69mm, M8300D – 210×114×69mm
Display	only for M8300D graphic display 4 lines 16 columns, 32x96 pixels
Keyboard	only for M8300D 3 buttons
Mass	base – 380g, scanner – 395g
Light source	630 – 680mm VLD
Minimal print contrast ratio	15%
Maximal reading speed	35 ± 5 scans/sec
Reading index	Biper, Datalogic Greek Lighst (3GL™)
Resolution	0,076mm for version AR 0,19mm

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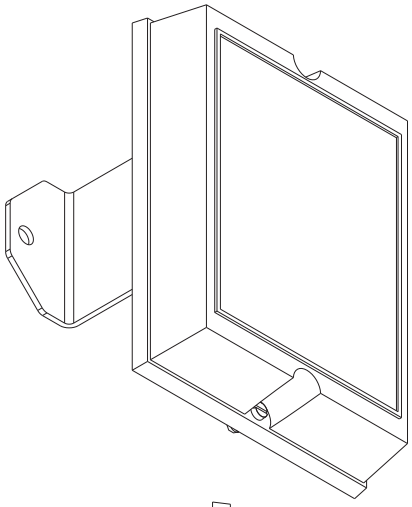
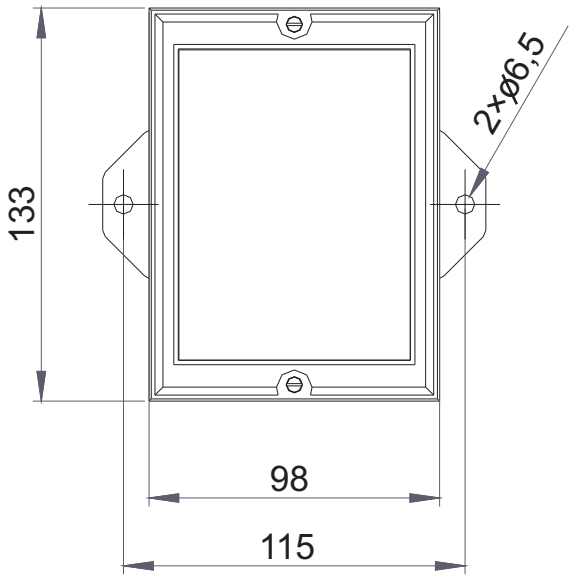
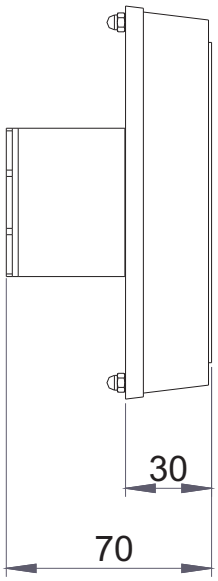
TRANSPONDER CARD READER CK-01

Applicable for fast identification and logging of operators of weighing systems or identification of vehicles on weighbridges.
The reader is designed for cooperation with weighing instruments equipped with TMC terminals.







Specification:

Type of operated cards	UNIQUE
Power supply	5V DC from weighing terminal, 9-24V AC (optional external power supply)
Working temperature	-10°C ÷ 40°C
Interface	RS232, (optional RS485)
Dimensions	98 × 133 × 30 without mounting handle

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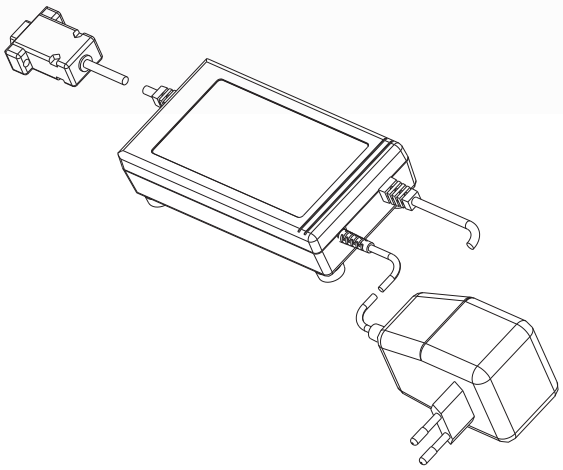
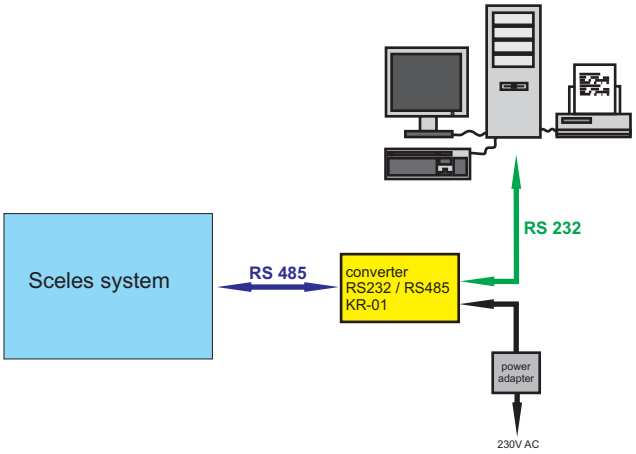
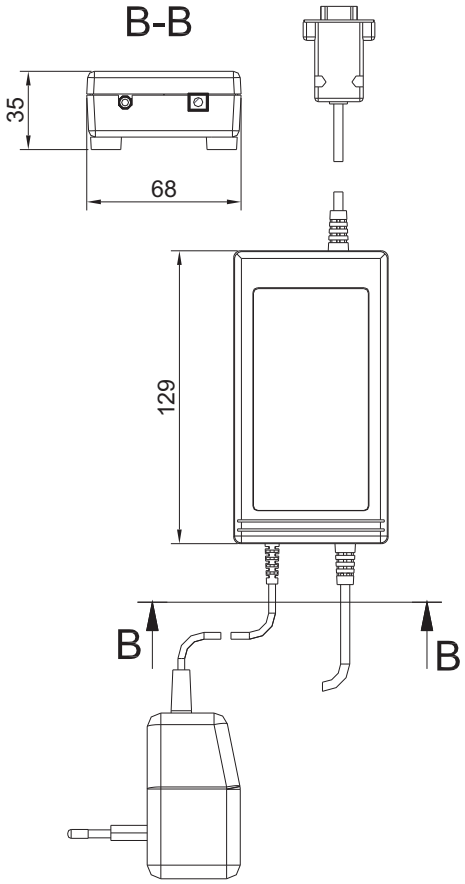
CONVERTER RS 232/RS 485 KR-01



A device designed for mutual adjusting the signals of standards RS 232 and RS 485.
It is equipped with automatic detection of the direction in which the data is transferred. It is has galvanized separation of the interfaces RS 232 and RS 485.
Applicable with weighing systems.





Specification:

Power supply	AC 230V/120V 50Hz 25mA
Speed of transmission	9600 do 57600 byte/sec
Choice of transmission direction	automatic
Galvanized separation between the interfaces	do 1,5 kV DC
Cable RS232	1,5m with plug DB9
Cable RS485	1,5m
Working temperature	-10°C ÷ 40°C
Casing	plastic
Dimensions	68 × 129 × 35

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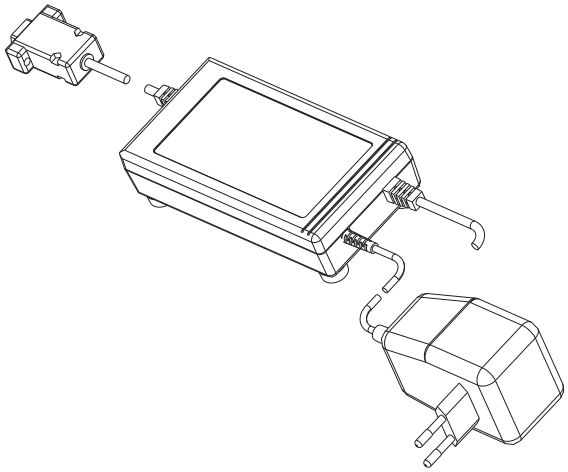
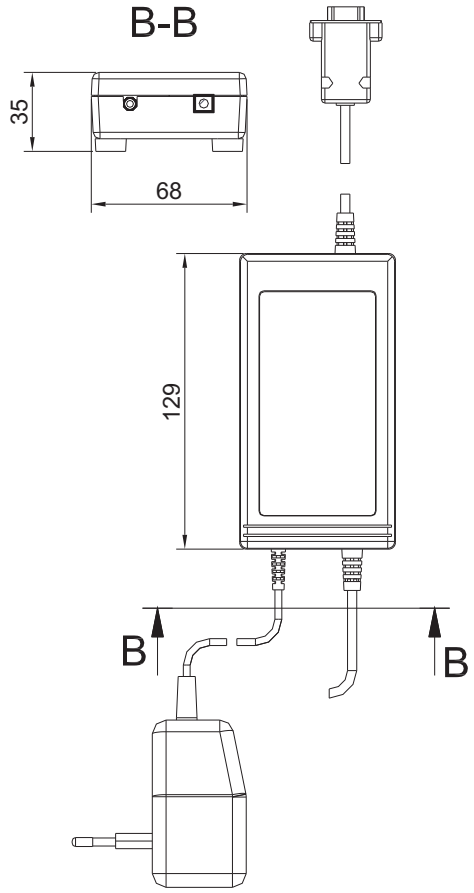
CONVERTER RS 232/ETHERNET KR-04

Converter KR-04 RS232 Ethernet is designed for scales equipped with interface RS232.
It is used for adjusting the signal to both standards RS 232 and Ethernet.
Converter is accessible in three options:
KR-04-1 : plastic casing, RS 232 cablewith plug DB9F, Ethernet socket RJ45, powered from mains external power adapter 230V/11V AC
KR-04-2 : stainless stee lcasing, RS 232 cable with waterproof, plug, Ethernet cable let out through a choke, power supply 230V AC
KR-04-3 : stainless stee lcasing, RS232 cable with waterproof plug, waterproof Ethernet socket, power supply 230V AC





Specification:

	KR-04-1	KR-04-2	KR-04-3
Casing	plastic	stainless steel	stainless steel
Ethernet output	socket RJ45	cable through choke	hermetic socket**
Applicable with scales*	scales with DB9 output	PUE C31/H, PUE C31/H/Z	PUE C31/H, PUE C31/H/Z
Communication with indicator, scale	RS232		
RS 232 speed	from 50 bps to 115.2 Kbps		
Ethernet standard	10/100 Mbps, (1,5 KV magnetic isolation)		
Power supply	ext. power adapter 230V/120V/11V	230V/120V AC 50Hz	230V/120V AC 50Hz
Working temperature	0° - 40° C		

*) specify type of scale (measuring indicator) when placing an order
**) cable model P0198 required for Ethernet is not part of converter equipment

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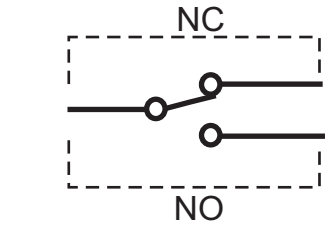
INPUT / OUTPUT MODULE PP-01

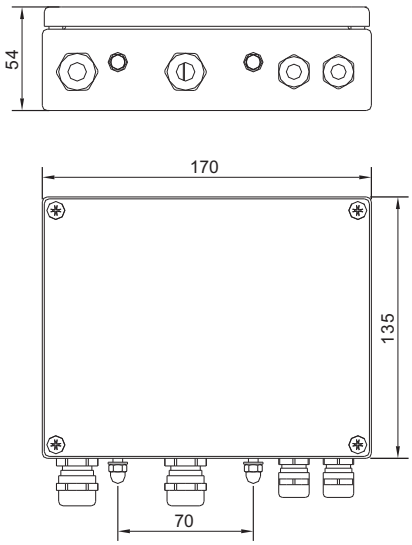
In /Out module PP-01 is designed for changing the transistor outputs into relay outputs in order to increase their maximal resistance.

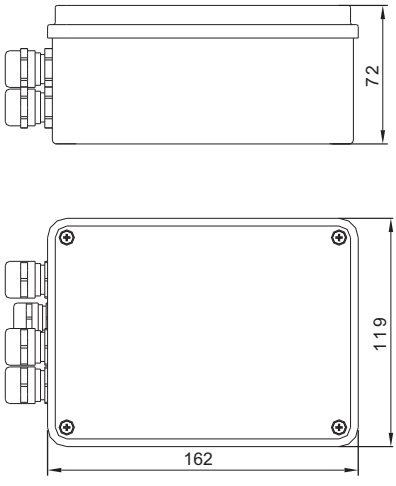
In/Out module is equipped with three relay outputs, and it is powered from independent power source 230V AC. It has also power output +5VDC. Additionally, module allows for powering three control buttons and connection of signalization diodes for the relay activation.

The device is manufactured in two casings:
-PP-01-1 : plastic casing IP 55
-PP-01-2 : stainless steel casing IP 67

SCHEMA OF SINGLE RELAY OUTPUT







Specification:

	PP-01-1	PP-01-2
Power suply	230V/120V AC 20mA	
Quantity of relay outputs	3	
Maximal current on replay contacts	3A/250V AC	
Maximal current if output +5V DC	200mA	
Working temperature	-10°C ÷ 40°C	
Casing	plastic	stainless steel
Dimensions	170 × 54 × 135 *	162 × 72 × 119 *
IP rating	IP 55	IP 67

* dimensions do not include the cable chokes and handle for mountinga

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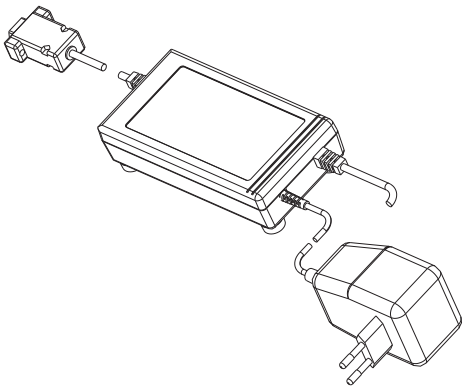
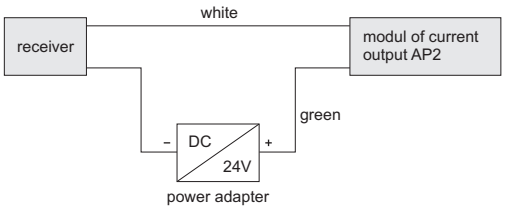
EXTERNAL CURRENT LOOP POWERED

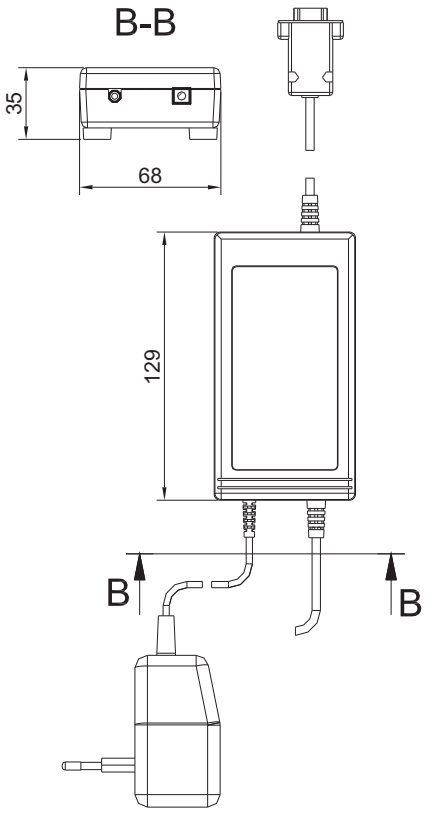


Module of power output 4–20mA manufactured by ZMP Radwag
is designed for conversion of digital reading mass onto analog value. It cooperates with Radwag weighing instruments. Power output is a wattless, i.e. it requires supply of external power supply to power loop with current 24VDC.
Module of power loop can reflect on its output mass indications as below specified:
- absolute value (no consideration of sign)
- only positive values
- mass indication with consideration of sign

Module of power loop can be offered with following measuring indicators (scales) PUEC/31

Diagram of power loop set 4-20mA





Specification:

Module power supply	230V/120V AC/ 5V DC 500mA
Power supply of power loop	24V DC
Power looses	450 mW
Output resolution	16 Bit
Linearity error	+/- 0.01 %
Indication error 4mA (+25C)	+/- 0.1 %
Temperature error for 4mA	+/-25 ppm/°C
Indication error 20mA (+25C)	+/- 0.2 %
Temperature error for 20mA	+/-50 ppm/°C
Working temperature range	-10°C ÷ 40°C
Cable RS232	1,5m with plug
Output cable	1,5m
Dimensions	65 × 28 × 128

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CABLES

Cables RS232 – computer

• P0107
Cable for connection of measuring indicator (weighing terminal) with computer.
Designed for:
HX weighing terminal
Standard cable length 1,7m

• P0108
Cable for connection of measuring indicator (weighing terminal) with computer.
Applicable with all measuring instruments by Radwag equipped with output RS232 DB9/M (male).
Standard cable length 1,7m

• P0165
Cable for connection of measuring indicator with computer. Designed for:
TMC weighing terminal
Standard cable length 2m

• P0259
Cable for connection of measuring indicator with computer. Designed for:
PUE C/31H,PUE C/31H/Z
Standard cable length 2m

Cables RS232 –KAFKA

• P0136
Cable for connection of measuring indicator (weighing terminal) with KAFKA printer.
Applicable with all measuring instruments by Radwag equipped with output RS232 DB9/M (male).
Standard cable length 1,7m

• P0140
Cable for connection of measuring indicator with KAFKA printer.
Designed for:
HX weighing terminal
Standard cable length 1,7m

• P0253
Cable for connection of measuring indicator with KAFKA printer.
Designed for:
PUE C/31H, PUE C/31H/Z
Standard cable length 2m

• P0166
Cable for connection of measuring indicator with KAFKA printer.
Designed for:
TMC–COM2
TMC weighbridge –COM3
Standard cable length 2m

Cables RS232 – EPSON, CITIZEN

• P0102
Cable for connection of measuring indicator with EPSON or CITIZEN printer. Designed for:
HX weighing terminal
Standard cable length 1,7m

• P0151
Cable for connection of measuring indicator (weighing terminal) with EPSON or CITIZEN printer.
Applicable with all measuring instruments by Radwag equipped with output RS232 DB9/M (male). Standard cable length 1,7m.

• P0171
Cable for connection of measuring indicator with EPSON or CITIZEN printer. Designed for:
TMC weighing terminal
Standard cable length 2m

• P0261
Cable for connection of measuring indicator with EPSON or CITIZEN printer. Designed for:
PUE C/31H, PUE C/31H/Z
Standard cable length 2m

Cable for supplying power from car lighter

• K0042
Cable for connection of measuring terminal to car lighter.
Designed for:
PUE C/31H/Z ,
Standard cable length 1,7m

• K0047
Cable for connection of measuring terminal to car lighter.
Designed for:
PUE C/31 in plastic casing. Standard cable length 1,7m

Cable RS485

• P0139
Cable for connection of measuring indicator (weighing terminal) with RS 485 network.
Designed for:
HX weighing terminal
Standard cable length 3m

Cable for Ethernet

• P0198
Cable for connection of weighing terminal to LAN not crossed network.
Connections:
RJ45 from LAN side
M12 4pin D-code from weighing terminal side
Designed for:
TMC weighing terminal with Ethernet output
Standard cable length 7m

RADWAG USA L.L.C.
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RADWAG®

RADWAG company, the manufacturer of Electronic Weighing Instruments is the biggest producer of balances and scales in Poland. Our range of products covers: modern laboratory balances, industrial and medical scales, weighbridges and checkweighers.

RADWAG has introduced and documented quality system ISO 9001:2000 and it is the only manufacturer of weighing instruments in Poland, which is authorized to issue "EC Declaration of Conformity" confirming the verification of its products.

RADWAG manufactures weighing equipment from the most precise balances (d=0,1 μg, Max: 2g) to high capacity scales, like weighbridges (Max: 60000 kg, d=20kg). Our offer includes also scales for meat and fish industry, complex weighing systems like dosing of labelling systems and multi stand weighing systems.

RADWAG has extended sales net created by our sales offices in Poland, and numerous authorized distributors all over the world. RADWAG exports its goods to all countries of European Union, and also to USA, Africa and to Far East.

TÜV CERT
Certificate No. 71 100 C 206
DIN EN ISO 9001:2000

OIML

PZH

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